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Study of Organ Inferiority and Its Psychical Compensation

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NERVOUS AND MENTAL DISEASE MONOGRAPH SERIES No. 24

STUDY OF ORGAN INFERIORITY AND ITS PSYCHICAL COMPENSATION

Studie über Minderwertigkeit von Organen.

A CONTRIBUTION TO CLINICAL MEDICINE

BY

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OF VIENNA

AUTHORIZED TRANSLATION BY

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NEW YORK
THE NERVOUS AND MENTAL DISEASE
PUBLISHING COMPANY
1917

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Gift from Institute for Individual Psychology 8-11-58

PREFACE

The purpose of this book is to add to clinical medicine a further principle of research. From the completeness and the import of these early results I am sure that I have come upon very fruitful territory.

To me, moreover, it was an attractive task to see our benumbed and thwarted conceptions of disease completely dissolved; to be able to observe human pathology in its making.

Many a valuable bit of knowledge has supported my theory of the inferiority of organs. I have been unable to give acknowledgment to all at the proper places, as I should have liked. In this paper, in addition to the authors named, the range of thought of *Martius, Rosenbach, Exner, Hering, Obersteiner, Haeckel, Schwalbe,* and many another has played a large part.

This work is to count as a beginning. Perhaps, at some future time, I shall be permitted to make the connection with clinical mediline, with psychology, and pedagogy still closer by bringing together all previous works on the subject.[1]

[1] The author has advanced this purpose in his monograph on the "Nervous Character," a translation of which has been published by Drs. Glueck and Lind.

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FOREWORD

At the beginning of the twentieth century Alfred Adler (1870–1937) investigated the influence of physical inferiority on the development of normal and pathologic mental trends, joining in 1902 the group gathered around Freud. As early as 1907, however, his studies on organ inferiority resulted in conclusions that were irreconcilable with Freud's theories. Circa 1912 he separated from Freud and founded his own school of Individual Psychology.

What Adler called "organ inferiority" is a condition that might occur as a familial tendency or as a situation in one individual. When the tendency was familial in nature one might find that a whole series of members suffered from a disorder that tended to attack one organ, and when organ inferiority is an individual tendency a disease would be liable to localize in the inferior organ since it is a common experience to find that inferior organs fail first in their functions when the organism is infected or under a particular stress. For example, a child may be born with a congenital heart defect. It is well known that such defects invite infective processes or at least they tend to focus there not only during childhood but also in adult life when serious infections in this organ may result in death.

It is possible for an inferiority to affect the whole of one half of the body or there may be a segmental inferiority or again there may be an inferior organization of a whole organ system like the nervous system or the gastro-intestinal apparatus.

To Adler the inferiority represented a defect in the material available for the construction of a normal well balanced personality pattern, and it became a point of crystallization for the mental superstructure of compensation and hypercompensation; moreover, this organ inferiority tends to increase the feeling of inferiority experienced by every child resulting in an intensification of the striving towards an often unattainable goal. In the course of this striving the personality may become distorted and exhibit the traits of a "neurosis" or of a character disorder.

In contrast to the Freudian school, Adler tended to minimize the rôle of infantile sexuality and to place greater emphasis on the ego mechanisms. He studied thoroughly the feelings of inferiority resulting from organic deficiency and abnormality, as indicated above, and described the unconscious attempt of the ego to compensate for such defects.

This whole concept later became known popularly as the "inferiority complex" and was extended to include psychical deficiencies the personality reaction to which was often one of overcorrection of the original disorder.

Professor Adler believed that the driving force is an urge toward the gaining of superiority and thus he tended to reduce much if not all of mental life to the individual's striving for power, a formulation not universally accepted since many believe that it refers to only one phase or aspect of life.

Adler, in commenting on an inferiority of an organ as the constitutional cause of the neurosis said: "The digestive apparatus, the respiratory organs, the heart, the skin, the sexual apparatus, the motor organs, the sense organs, and the pain paths become thrown into excitement according to their fitness for the expression of the wish for power and show the forms of hostile aggressive attack or of quiescence and of flight, inhibition of aggression both in harmony with the 'vital line' of the patient with his secret life plan."

Everything is teleologic. All is purpose even in the dream; the expression of the "will to power" or desire for superiority over others. A successful striving for power results in the attainment of ambitions, a failure leads to neurosis, a flight from reality or the development of symptoms to explain the failure.

In 1912 an important study entitled "Psychoanalyse und Ethik" appeared by Karl Fortmüller. He started from Adler's basic hypothesis and sought to explain the ethical imperative as a defense against the feeling of inferiority (Minderwertigkeitgefül).

The psyche and the soma have developed together through the stages of evolution in the relationship of function and structure. They are probably inseparable practically, and even theoretically, on the basis of any logical system of thought. As Bently has said "The bodily system alone does but it physiologically does only by an active interaction with other physical systems and it psychologically does only by making use of its own products and issues." It must always be kept in mind that integration is not merely addition or summation of multiples but it is a multitude of multiples plus organization. There are literally thousands of written treatises on the "constitution" in disease and many of these are of psychiatric import, but the scientific correlation of psychological aspects and symptoms with organ defects and diseases remains to be completed. This may be due in part to the fact that most students concern themselves chiefly with studying physiological, morphological, chemical, or psychobiological units instead of taking into account the total situation and

breaking it down into even finer divisions where relationships may be revealed.

This little book has not only an important historical value but it presents a number of foci for future research. A thorough investigation of organ inferiority concepts should be undertaken and included as a part of the present day trends in psychosomatic medicine.

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INTRODUCTION

An examination of the diseases of the urinary apparatus can be very extensively carried on so far as their symptomatology is concerned. In renal pathology, as in all other diseases, the schema of symptoms is built up empirically, and accordingly rests on a firm basis. It is richly enough equipped to lead the diagnostics of renal diseases along safe paths. The compass is at once reduced, however, when the examination is directed towards etiology. The theories of the causes of renal diseases read like a short collection of truisms, in which terms such as predisposition, chill, poisons, infection, disturbance of the circulation appear and reappear and play their part, just as they do in other organic diseases.

The fact that a definition of these casual factors themselves is notably lacking ought not even to be particularly emphasized. More important is the fact that there is so little positive material available to decide the question concerning the localization of disease in the kidney. What has been emphasized, the sickening of the kidneys through poisoning or infection as well as through the progressive changes in affections of the circulatory system, all this is in line with the basal concepts of pathology, for the urinary organs are affected like all others proportionately to their relation to the disease centers.

The conditions in those cases which one is forced to designate as "genuine," or "primary" diseases of the kidney are less clear. A long list of diseases falls under these heads. They all have this in common, namely, that the final cause of their pathologic form cannot be traced beyond the kidney, and that a more remote or even an exogenous etiology—from the very name—seems out of the question. Here may be reckoned, if all other distinguishing indications are put aside, true contracted kidney, renal tumors, localized lues and tuberculosis, cystic degenration, nephrolithiasis, nephralgie hématurique, renal hematuria, floating kidney, imperfect development and hypoplasia and analogous diseases in the pelvis of the kidney and ureter. I must add also that the genetic course of development in secondary diseases must not under any consideration be deemed exhausted by reference to the *causa movens,* but, rather, in these cases too, the selection of the kidney is determined in a hitherto unexplained manner.

If one turns aside from an explanatory attempt which limits

itself to causes of disease which are purely local and situated in the kidney, one can divide the notions on localization of disease in the kidney synoptically into three groups, of which each one has reference to secondary as well as primary diseases. The one hypothesis tries to make the selection of the kidney as center of the disease tenable on the ground of "nephrotoxic" action of a number of poisons. The strength of this hypothesis lies in experimentation, as well as in a number of recorded cases which bring to mind a noxa especially harmful to the kidney, such as is present in scarlet fever, diphtheria and other infections. On the other hand it is inapplicable to a great number of renal affections, does not offer an explanation for the kidney's remaining unaffected upon the appearance of renal poisons, and should only be generalized with the utmost caution on the basis of animal experimentation. At any rate we know of no poison at present that invariably harms the kidneys, and at the same time, only the kidneys. A second conception sees the cause of the greater number of renal diseases in the exposed position of the kidney as an organ of excretion through which the waste material of the body is constantly passing. This hypothesis is supposed to serve as a sufficient explanation for most of the renal affections. Its application is surely greater and its bearing unquestionable, since it has to do, not only with true toxins, but also with the increase of waste products and with heightened external demands upon the kidney. But even with this conception we are not in a position to give satisfactory explanations. It also leaves us in the lurch when we ask why, with the admission of the premises, that is, the presence of bacteria in the blood, of toxins and poisons, of chronic metabolic anomalies, of alcoholism, pregnancy or chill, the kidneys are so often found healthy. It also fails us in attempting to explain one-sided disease of the kidneys, as in cases of tuberculosis, lues, and tumors. These and other inadequacies force us to a third view, which will be championed, and with good cause, I believe, in this book, a conception according to which most renal diseases are caused by a fundamental inferiority of the urine-excreting apparatus.

That such a condition may be accepted for many cases, and plays its part in renal pathology is probably universally recognized. The appearance of true renal diseases can not be sufficiently explained by the acceptance of hypothetical poisons of metabolism. Above all, the pathological findings, as well as the clinical course, both contradict chronic poisoning. This view is refuted almost as strongly by the frequently long duration and by the numerous hereditary

appearances. In the same way, albuminuria of puberty, renal hemophilia, cystic kidney, the pregnancy kidney, orthostatic albuminuria, and albuminuria connected with constipation are all indications which one can hardly overlook. But one of the strongest arguments for inferiority of the urine-excreting apparatus as the cause of renal diseases, is heredity, which is so often found in renal pathology. At most it is still questionable whether certain of these cases of albuminuria should be considered diseases. The difficulties in determining the question will not be denied, for the transition from mild anomalies in the condition of the urine, to severe forms of renal diseases, has not yet been sufficiently studied. But even cessation for a number of years or improvement of the phenomena, whether under medical treatment or not, has no conclusive force. One can, however, justly emphasize that the acceptance of inferiority of the kidney as the cause of renal diseases, regarded from the pathological viewpoint, has many probabilities in its favor, that the transition from abnormal development and functional anomalies to disease can be brought about in the shortest time, and that in many cases it becomes questionable just where the aspect of the disease begins for us. The "physiological" albuminurias play the same part there as, say, the cystic kidney, which can formally appear overnight as a severe illness, after it has existed for some time without any symptoms.

By means of an examination of this sort, from the standpoint of an inferiority theory, these previously mentioned affections of the urinary apparatus attain their proper place in pathology for the first time. Their significance in the field of renal pathology comes out more clearly through the demonstration of a fundamental inferiority. At the same time it seems necessary to conduct more searchingly the examination of constitutional organic anomalies as the foundation of many, perhaps of most diseases, so that the diagnostician may draw strong support from the facts of the inferiority theory. The value of this view, however, extends to the study of the symptoms also, and to experimental pathology. In regard to the latter, it determines once for all the differences between inferior and normal organs and thus interferes with the unlimited transference of results of animal experimentation to human beings, and of experiences with well people to sick ones. In regard to the first, it seeks to establish a still closer bond between the empirically determined symptoms, and the diseased organ, and makes related organs responsible for symptoms of a more widespread organic disease. There will be particular stress laid on personal prophy-

laxis in all those cases where it is possible to deduce organic inferiority, where signs of disease have not been already proved. Just as is the case at present, when diseases in the parents arouse suspicions in regard to the children. We must determine first of all for therapy whether the inferior organ should be and can be, by means of any sort of a course of treatment, aroused to sufficient function and eventually to additional development, a question to which one can often answer yes, in the case of young people, but which with older patients must frequently be answered by no. The answering of this question will, however, usually call for a deeper knowledge of the nature of the inferiority in question, and its significance for the patient concerned. If one is obliged to give up an active cure, or training, then the laws of a protective plan of treatment—rest, relief—come to the fore. Finally, in making the prognosis, *quoad vitam,* or *sanationem,* the inferiority theory, likewise, guarantees valuable aid. From the point of view now resorted to, not only the sum of the phenomena presenting themselves, the phases, so to speak, of the contest, will have to be taken into consideration, but the valuation of the organ has also to be effected, and we must fix our eyes upon the relation of this value to the disease-exciting force.

These explanations will serve to substantiate the fact that a study of the inferiority of organs is at the foundation of some of the most important problems of pathology. In the following pages I shall try to establish that this theory may claim to be considered as a valuable "heuristic" method on the basis of the characters or conditions that underlie it.

STUDY OF ORGAN INFERIORITY AND ITS PSYCHICAL COMPENSATION

CHAPTER I

Outline of a Theory of Organ Inferiority

After having attempted in the previous pages to sketch the great significance of a study of organ inferiority in renal pathology, to which we will add a few special additional illustrations in the supplement, we find ourselves called upon to enlarge the domain of our research and to take into consideration all of the organs. We must do this so much the more, as, on the one hand, the argument which gave us the authority for declaring the inferiority of the urine-secreting apparatus one of the fundamentals of renal pathology, can be made to apply to all other organic diseases, and on the other hand, the pathological phenomena of the diseased kidney can, in an analogous manner, be demonstrated in the whole field of pathology. Chronic transformation of the parenchyma, pathological form of the supporting tissue, cystic degeneration, formation of concretions, localization of inflammatory and neoplastic tumors, malformation, imperfect development, diminished development in the whole apparatus or in parts of it recur in all or several of the organic diseases, and the theory of inferiority always seems called upon to complete the otherwise insufficient etiology.

We find analogous transformations in the liver, in the pancreas, in the thyroid gland, in the genital tract, in parts of the digestive tract, the respiratory and circulatory systems, and in the central nervous system. A great number of these diseases are marked by characteristics which are emphasized in renal diseases, such as heredity, chronic course of the disease, typical localization within the organ, an insufficient etiology supported neither by poisons nor bacteria, but they can easily be put into a framework of a theory of inferiority. This is the case in the pathology of the thyroid gland, the etiology of which has proved itself quite insufficient, but which corresponds to all the heretofore mentioned conditions of an inferiority theory, particularly that of heredity. The macroscopic as well as the microscopic pathological changes of the liver show phe-

nomena analogous to those seen in almost every case of renal disease, for which reason the primary diseases naturally interest us most.

It seems superfluous to us, further, to point out in detail how certain transformations may be found in every individual organ, since this is really a problem clearly enough set forth in general pathology. Only the lack of satisfactory etiology will be emphasized in this connection. On the other hand, the question which is raised in this paper, and which we are trying to solve, asks rather, what reasons there are for the fact that certain diseases attack just a certain organ. The solution accepted by us, which takes a primary inferiority of this organ as a basis of the disease, is at one with the opinions and researches of many authors. In this question we can, perchance, only claim to have undertaken the study of organ inferiority more comprehensively, and to have considered its significance of greater import. A greater objection might however be raised against the further declaration that other diseases, too, not considered true diseases, such as infectious diseases, and "adventitious" diseases, often require, or at least are dependent upon, the assumption of organ inferiority in their course. A still greater number of diseases might be mentioned at this point, as, for instance, tuberculosis, which is probably always localized in the inferior organ, an assumption which, if conclusively established would bring many of the doubtful questions relating to heredity, place of entry, and paths of infection, immunity and therapy, nearer to a solution. The colonization of Löffler's bacillus and other microörganisms in the pharyngeal space, of the Fränkl-Weichselbaum diplococci in the lungs, the agents of typhoid, cholera and dysentery at definite spots in the intestine, and many other infections, likewise, fall under this head. At the same time the part that bacterial invasion has played should not be denied. But the acceptance of an inferiority of the diseased organs seems particularly assured, since the presence of many pathogenic microörganisms can be demonstrated in well people. To be sure, one can often expect only obscure signs of inferiority, in fact in a number of these diseases the illness itself and its course must be considered, for the time being, as evidence of inferiority. This causes us to drop the conception of "absolute" inferiority for these widely spread diseases, and to introduce the term "relative" inferiority, which is of value, be it temporarily or only in regard to certain causes of disease. As regards tuberculosis, to be sure, the proofs of primary inferiority of the lung, or of other attacked organs, seem to be abundantly present. The very appearance of

heredity makes this more easily acceptable. Likewise the frequently typical localization in the lungs, kidneys, joints and brain. As a matter of fact, citations may be quoted which give information in regard to certain arrests of development, as those of Fränkl, Schick and Sorgo, statements which we can without further ado classify with the signs of degeneration which are emphasized later on.

With reference to diabetes, epilepsy, tumors, chronic alcoholism, obesity, cretinism, and a few other diseases, I undertake to determine, after looking through a considerable amount of material, their position with reference to the study of organ inferiority. A little series of observations has suggested to me to consider these diseases, also, as built upon a foundation of organ inferiority.

The rôle of chance in diseases of inferior organs is surely not as great as is commonly thought. One comes in contact, at least, with cases that strike one so remarkably that a greater number of them succeed in convincing one that their determination has been differerently and more strictly given than by mere chance. One of these cases I will present in the following. Ladislaus F., 8 years old, was injured in August of the year 1905, by a pen which went into the outer upper quadrant of the left eyeball, and reached through the conjuctiva bulbi into the sclera. The patient had come too close to a schoolmate who was brandishing a pen, yet neither of the boys could be accused of malevolence or particular inattention. The wound healed with slight reactions. In October of the year 1905, the boy again presented himself with a coal-splinter, which a gust of wind had blown into his eye, imbedded in the cornea of his left eye. After extracting the foreign body the wound soon healed. In January, 1906, the patient again received a prick in the left eye, which was caused, just as on the first occasion, by a schoolmate with a pen he was using, and which was about 1 cm. below and inside the first punctured wound. This wound also healed like the first, in a short time, leaving an ink-tinged scar. One might think that all this was purely bad luck. I was able to ascertain the following: The maternal grandfather suffered from diabetic iritis and was for a long time under the care of an oculist. The mother had convergent strabismus, likewise the patient's younger brother, and both had hypermetropia and diminished acuteness of vision, which could not be accurately demonstrated owing to the inattention and lack of intelligence of the boy. One of the mother's brothers was troubled by numerous recurrences of conjunctival eczema, and had convergent strabismus. Our patient had full acuteness of vision, hypermetropia to a slight degree, but showed a lack of the conjunctival reflex in both eyes.

I do not wish to deduce too much from this case. Nevertheless it seems certain to me that one must accept an inferiority of the organ of vision in this boy, which is pretty well established by heredity, the different varieties of illness in his relatives, partly of inflammatory, partly of functional nature, and the deficiency of the reflex function of the conjunctiva and the poor protection of the eyes, a fact which seems to me to be related in some not yet wholly explained way to the deficient reflex action. At this point I must also add that under adequate psychical conditions, by means of greater activity on the part of the psyche, the above mentioned inferiority of the eyes may be made good. The boy can learn by experience and can hide the partly organic defect by psychical exertion. The transition between organic inferiority and psychical compensation becomes comprehensible in such cases. But there can also be no question that from the nature of the psychical compensation the traces of the redeemed organic inferiority remain unobliterated, and that, for example, in the above-mentioned case, the protection of the eyes must have moved into the field of conscious awareness, and in this manner the visual character of the individual experienced a particular strengthening. But more of this later.

Meanwhile permit me to add, in this connection, the following about the nature of organ inferiority, which seems already to have been elucidated here and there: For the purpose of a simple and distinct arrangement, we shall name only two forms in which the inferiority of an organ expresses itself, morphologic and functional inferiority. Both are present at the same time in the majority of cases. I should like to designate as "relative" inferiority, a third form, upon which I shall lay little stress. This declares itself only in the case of illness and becomes recognizable only under increased demands or following upon systematic tests.

2. Morphologic Inferiority: One can point out as deficient the development of the shape of an organ, its size, its individual portions of tissue, individual cell complexes, of the whole apparatus or of limited parts of the same. A certain probability, which is in accord with biological conditions, would have it appear that fundamentally just the most highly developed, differentiated cells and cell-complexes have come out the worst, while the tissues of lesser capacity, which owe their development to an earlier embryologic epoch, may be normally or even super-normally developed. The deficiency will concern first of all those portions of tissue which as secretory, nervous elements, protective tissue, excretory ducts or

supply channels, guarantee the full development of the function. When life activity begins and with it the innumerable sources of stimulus of energy and metabolism, the remaining fetal or postembryonic tissues will experience a great demand and a sufficient sudden impulse to growth. Their final formation will, to be sure, not be that of normal fetal development, but will be enough to insure the functions necessary to life. In relation to the life and health of the individual, the consideration is, that one of his organs has to perform the functions necessary to the economy of the organism with a lesser stock of tissues or one less capable of resistance. With satisfactory structural material and sufficient provisions it is often possible to master the work. But just as often, perhaps, the hour comes when the insufficiency of the organ is revealed, when the external and internal hindrances can no longer be controlled. The normal structure and wear and tear of the organ give place to regressive phenomena, which are just as much determined in their nature by the morphologic inferiority of the organ, as by the special causes setting the disease in action. The moment at which the function necessary to life fails is relative. It is accordingly not at all surprising to find that at times inferior organs suffice for a complete lifetime.

From the conditions of morphologic inferiority of an organ the cause of which is always fetal defect of development, the following conclusions may be positively drawn:

1. Since the fetal defect in development is brought about by inherited or acquired properties of the spermatozoon or ovum the hereditary character of organ inferiority must stand out in a particular fashion. The heredity may not always be exhausted in the morphologic inferiority of one and the same organ, it can, as will be later shown, be proved by functional deficiency, by inferiority of a second organ, as was pointed out before, or by cases of illness [" relative " inferiority] among relatives.

2. Since the greater number of organs are withdrawn from direct observation we are often compelled to infer possible inferiorities from anomalies in their size, form, and position. An extremely important makeshift is presented in the functional anomalies which should be considered in conjunction with other characteristics of organ inferiority as authorized signs of inferiority. Directly perceivable to the eye and sense of touch are the organic inferiorities lying close to the outer integument and often standing in relation to it. These have passed up to the present day under the name of external signs of degeneration, or stigmata. They represent for

the greater part nothing more than the visible expression of the inferiority of the related organ, whereupon in the individual cases, at all events, the question always arises as to how far into the deeper part of the organ the inferiority extends.

3. From the fetal character of the morphologic organ inferiority, from the embryonic lack of material which we think causes this, it follows that frequently manifold organ inferiority must occur which can be explained either by local difficulties or by deficiency of material extending through several organs. The relation of different organs to each other has to play a part in this, a part which began likewise in the embryonic stage. In these cases also, a fact which is confirmed by experience, a morphologic anomaly can be replaced by a functional defect.

2. Functional Inferiority. Perhaps this is the chief group, since through some functional defect the morphologic anomaly becomes perceived. Its characteristic quality is, briefly stated, a quantity or quality of work insufficient to satisfy a standard of required effectiveness. The compensations, which in many cases endure for some time, consist in the vicarious replacement by a symmetrically placed organ, in the compensating aid of a portion of an organ related to it, in the use of another organ, or in the heightened use of the inferior organ itself. The provisional outcome depends on the actual reserve strength.

The pathology of these conditions exhausts itself in all conceivable anomalies of execution, secretion, and growth. The work of the organs or portions of organs on which greater demand is made, is performed under heightened external and internal pressure, so that at a certain point of the organism an increased condition of irritation must be relieved in order to guarantee even unstable equilibrium. Shock of any sort, infections, conditions of exhaustion, overwork of a bodily or psychical nature, disturbances in temperature will usually show their effects in this exposed place. It is easy to understand that even the usual demands of life, of civilization, at this critical point also, the "locus minoris resistentiæ," may be frequently followed by harm.

The observations on the vicariousness of symmetrical organs are old and have to do with inherent differences of form and function, as well as with differences acquired during life. Here we can cite: Compensation of one cerebral half for the other, just as with the halves of the thyroid gland, of the lungs, of the kidneys, the ovaries, the testicles. If we put aside the certainly determined cases of inferiority which are but rarely found, we find ourselves

forced to make a diagnosis of organic inferiority upon the establishment of the phenomena of vicariousness in cases that occur. This condition, and the so often observed increased tendency of inferior organs to grow, which I will mention later on, and the condition, not at all rare, of equal and uniformly divided anomalies in both sides, as are found one-sidedly in vicarious forms, and analogous conditions in asymmetric organs on the basis of primary inferiority lead to the assumption *that just the primary inferior organs seem predestined under certain conditions to take upon themselves for a shorter or longer time an increased functional activity.* In addition to the well-known types, emphysema in functional inferiority of the other lung, struma parenchymatosa lateralis in atrophy of the other side, renal hypertrophy in atrophic processes of the second kidney, etc., may be cited. I should also like to mention here left-handedness, partial situs viscerum inversus, and the vicariousness of the halves of the central nervous system. If in all these phenomena there is also no doubt of inferiority, they surely represent merely a lesser degree. There can be no doubt that the primary inferior organ which frequently suffers in its deficient development in size and which is functionally not up to the level of a normally developed organ, if it is not forced to be vicarious, often has only to do a very small amount of work. This is apparently the reason why it is at times found healthy while the vicarious organ is diseased. This condition was found in the following case:

Miss Fanny H., 23 years of age, comes of a tuberculous family. Her mother died early of pulmonary phthisis, a sister is also suffering from a pulmonary disease. Except for children's diseases, the patient has not had any notable sickness. For some time there has been a strong tendency to constipation; pallor of the skin and of the mucous membranes; palatal and pharyngeal reflex lacking. In the spring of the year 1905 the patient began spitting blood. A long sojourn in the South brought a slight improvement. In May, 1906, in the region of the apex of the right lung, diminution of sound and a slight rattling during expiration could be heard. The distance from the spinous process of the 7th cervical vertebra to the processus coracoideus was 18 cm. on the right, on the left 16 cm. The patient said that since her childhood the right half of the thorax had been noticeably more developed than the left. Even the breathing on the right exceeded that on the left side. We find the focus of disease in this case at a point where the fundamental inferiority of the respiratory organs, which evinced itself clearly enough in the heredity, had made good functionally as well as

morphological. But in these and similar cases it seems plausible that the increase in function and of growth in an inferior organ can also give opportunity for increased predisposition to disease, if certain definite relations are disturbed at the same time. Sorgo and Schick recently pointed out that with tuberculosis there is often a smaller nipple or a smaller areola on the side of the disease center, but at times this is true of the other side. We believe that we have indicated the connection and the explanation for this.

There surely are a number of pure cases of inferiority in which we do not find vicariousness, just as an asymmetric organ can remain without compensation. My impression is that in the asymmetric organs which may be called inferior in the majority of cases, there are also partial compensation phenomena. And, for this reason, that general inferiority of an organ or an apparatus represents a certain degree of inability to live, which gives sufficient cause for early death. One can find support for this conception in families where the infant mortality is high. There need be no doubt at all of the frightful weight of social conditions, but, as in all other attacks of disease, the bulk is concentrated on the inferior organ. Most frequently we find these compensation phenomena in the circulatory system and in the gastro-intestinal tract, where they occur, in accordance with the ruling theory, above all, to act as a temporary balance of mechanical disproportions and conditions. Meanwhile the organ's feebleness alone makes it suspicious. One really ought to accept the fact that a training, more conformable to nature, as on the part of the organ to overcome a usually slowly arising stenosis, is scarcely feasible. And yet in many cases we find such a complete lack of compensation in a more or less short time. The notion of an inferiority in the compensating segment also, of which the energy of growth is used up only the more quickly, explains this weakness a great deal. Add to this, that we are forced to see an inferiority of the attacked part of the organ, according to this exposition, in the establishment and the development of the centers of disease, an inferiority from which we cannot without further question exclude the adjoining portions. We should like to extend similar demonstrations to the urinary strictures and to lithiasis as well as to the compensatory occurrences in the central nervous system.

I can summarize briefly in regard to compensation of an inferior organ by means of a second organ. In this line we are accustomed to think of cardiac hypertrophy, by which a deficiency in the kidney or the lung is compensated. There is no doubt as to the facts. I

will only add, as above, that in such cases many things lead one to call the heart an inferior organ too. I should like to say, besides, that this group surely deserves much more attention than it gets at present. The frequent compensatory intervention of the brain in deficient organic functions is undoubted. But the glands with excretory ducts also and the ones with internal secretions can often be made to compensate. The disease phenomena as a whole are often governed by the disease of the compensating organ. The results of the pathologic anatomy do not always cover the disease phenomena that have been found, since they indicate changes, whereas the clinic often has to judge the expression of relationships. Many diagnostic errors, many failures in therapy, are rooted in this not wholly clear connection. To be sure an individual inferiority, as for instance of the kidney, can arise and provide a symptomatology on the grounds of a mechanical, or some such sort of correlation of organs. Above all we must think in this connection of the consecutive disease of the heart, the skin, the eye and the digestive tract, for the relation of which to kidney affections, pathology offers sufficient authority. On the other hand, however, we must emphasize the fact that many of these consecutive seizures are compensation phenomena on inferior ground or "reactionary diseases" in other inferior organs, as in the case of L. Z. in the appendix. From the whole ensemble of inferiority this idea comes strongly to the fore, that normal organs are compensated less by hypertrophy and more by hyperfunction. On the other hand the more inferior the formation of an organ is, the less it has succeeded in functional development, and the sooner it will react with excessive growth to stimuli of all sorts.

It is only a step from the fact of excessive growth in inferior organs to the acceptance of the origin of neoplasm in such organs. This seems to us justified if we regard properly the familiar occurrence, the anamnestic particulars, their appearance in or near primary inferior organs. Whether parasites come into consideration for individual neoplasms, I must leave undecided, but do not consider their part very important. The anamnestic data, particularly, speak for the acceptance of the fact that neoplasms originate only in inferior organs. I could always be sure in my cases, and literature offers enough proofs, that the development of the carcinomas are preceded by a number of years of functional disturbances, or further disease of the organs, frequently of a neurotic nature. The conception of a fundamental connection of lupus, chronic catarrh, inflammation, hemorrhages or microörganisms with the forming of a

carcinoma, regularly leaves the causal factor unexplained. According to our conception, all these presumed "etiologic" affections are characterized in like manner as the neoplasms, as manifestations of the inferiority of the diseased organ. The same is true for the origin of neoplasms from nevus, in which case the nevus pigmentosus often betrays in unpleasant fashion inferior and diseased organs. At least, I have learned to watch for it in my cases, and have frequently found it near the diseased organ in pulmonary tuberculosis, renal affections and appendicitis. Since the embryonic origin of nevus pigmentosus and its familiar occurrence has been determined, furthermore, since the facts which lead to Cohnheim's carcinoma theory of the scattered embryonic germ seem undisturbed, a confirmation of this theory of mine can also be drawn from his point of view. Only, in place of the scattered embryonic germ, which has not up to the present been established, the fetal character of the inferior organ enters completely or in one of its parts.

It will not do at all, however, to make the proof of the inferiority of an organ depend exclusively on its disease. Only the layman will refuse to admit that a long life is quite compatible with a long illness. Even an inferiority does not of necessity lead to an early death. To be sure, the outcome is determined by the concurrence of deficient fetal development, conditions of irritation, and material reserve under stationary external requirements. One will find changes of atrophic nature, opposed to them those of hypertrophic character, decreased or increased ability, the most varied anomalies of external and internal secretion, deficiency and excess. If in addition we try to take into consideration the external conditions, the demands of exertion, infections, domestication [Hansemann] and surroundings, the diseases of over-pressure and consumption [Edinger] which have just attained importance, localized infectious disease, neoplasms, appendicitis, ulcus rotundum, hypertrophy of prostate, etc., neuroses, nervous diseases of peripheral and central type, racial and family diseases, tabes and paresis, all come within the field of our calculations.

The amount of material to be worked over is accordingly overwhelming. In single cases, the organized points of view suffice to give a survey, and to point out the inferior organ. The determination of the localization of the disease is, and will be, under all conditions, of tremendous importance. The framework of the present clinical medicine is not overstepped. But it is evident at once that our point of view leads further, and puts us into the position to make possible further understanding of the above-mentioned

process, since in connection with the knowledge of sickness in many cases there is established also an organ inferiority, from the nature and intensity of which results are obtained which are of value in the realm of etiology, symptomatology, and therapy. It is moreover clear that new resources are opened up for the individual observation at the sick bed, that is to-day very hazardous, and which are particularly of value in infectious diseases. I can not permit the endemic and epidemic diffusion of infection to count as a serious argument against the theory of organ inferiority. Instead it only shows the relative inferiority of our extant organ cells in the struggle with the microörganisms. On the other hand the prognosis, therapy, and above all the theory of complications of disease, secondary diseases and sequelæ in these cases also fall into line with the norms of the inferiority theory. The regard for organ inferiority will attain greater surety in all these questions, the better we are able to understand the relations of the inferiority. The course of a case of diphtheria surely depends primarily on the antitoxic power of the organism, on the active or passive immunizing power, but the value of the heart, kidney and respiratory apparatus also comes into consideration for the crisis.

Besides the inferiority of an organ does not need to reveal itself throughout a whole lifetime, or the expression may remain so insignificant that one scarcely thinks that one has an inferior organ before one, or else it expresses itself in morphologic anomaly and even then at times so slightly that the condition of the individual is not affected. Slight deviations also, at times in the most primiive functions, may represent the whole of the inferiority, which at other times may lead to disease and death in the victim. A significant light is thrown on the nature of organ inferiority by the frequent phenomenon of manifold inferiority in the organs of a person and the part played by the brain and spinal cord in connection with it, which frequently act compensatingly and cover the existing defect or else shape it to useful ends. In the following pages then we shall discuss:

I. Heredity.
II. Anamnestic demonstration.
III. Morphologic characteristics.
IV. Reflex anomalies as indications of inferiority.
V. Manifold organ inferiorities.
VI. The part played by the central nervous system in the theory of organ inferiority. Psychogenesis and foundations of neuroses and psychoneuroses.

CHAPTER II

I. Heredity

Here we find ourselves on familiar ground. The significance of heredity however, is esteemed differently by different investigators. Some bring forward the family anamnesis, refer every exact conclusion back to that and want, at best, to deduce from it greater or lesser predisposition to disease. Others, particularly more recent writers, find very nearly similar hereditary conditions in healthy as in sick individuals, and they put aside all deeper meanings of the problem of heredity. For the most part, the conception of the ability to inherit a temperament which under suitable conditions leads to hereditary disease is prevalent. As far as we can determine French students have always inclined to place sharper emphasis on heredity than German students.

There have also been contradictions, which we think can, without very great difficulty, be put aside. In the foreground of our assertions regarding heredity belongs this sentence: *Heredity consists in inheriting one or more inferior organs.*

A survey of the diseases regarded as hereditary supports this assertion, which contradicts the conception of hereditary degeneration of the whole organism. Even that which is called mixed heredity, as in epilepsy, mental disturbances, hysteria, chronic alcoholism, etc., may be classified according to individual inferior organs, wherein the influence and development of the central nervous system is strikingly noticeable. We will have now, at this point, to lay down a fact which is of the greatest importance for the whole conception of our work. *The inferiority of an organ may reveal itself in the descendants in the most diverse parts of the organ.* With this statement a great number of contradictions to the theory of heredity are removed. Above all "mixed heredity" is reduced to a simple hereditary inferiority of the nervous system. But those investigators are in the right too, who attribute, regardless of seeming contradiction, the greatest significance to the heredity problem, despite the fact that sick children may come from healthy parents or individual healthy children from diseased parents. For from the most different sorts of localization of inferiority in the organ and its appertaining parts there naturally arise widely differing

degrees of vitality and predisposition to disease. We must however consider that there are a great number of forms of inferiority which plainly injure neither health nor duration of life, such, particularly, as mild functional or peripherally situated inferiorities.

In our work we recognize, not the heredity of the disease but the heredity of the inferior organ, a conception which has not yet made a way for itself in all pathology, but has probably been accepted for individual pathologic phenomena. We wish to try to defend our idea and to introduce further support than that which has hitherto belonged to it in a series of diseases which have usually been considered hereditary.

The introduction of heredity in cases of genuine epilepsy seems comparatively free from objections. The anomalies of form in the brain emphasized by Meynert and others coincide with our morphologic inferiorities. We shall have to lay claim to the epileptic equivalent, the imbecility which occurs, as a functional inferiority of the brain. The etiological importance of polioencephalitis discussed by Freud and Rie is found in its appearance as a form of disease of an inferior organ, namely the brain. In our opinion other diseases which have been emphasized are connected with a similar inferiority of other organs. This is the case in the frequent anamnestic determination of nocturnal enuresis, a functional inferiority of the urinary apparatus, which, in favorable cases, may be counterbalanced by compensation of the central nervous system. The anomalies of the circulatory organs, also, which are on many sides connected with the question of epilepsy, may be thus compensated. Asymmetry of the base of the skull, ocular anomalies, signs of degeneration in the head continually direct our attention to the inferiority of the brain, and are to be counted as peripheral expressions of this inferiority. Changes in the reflexes of the mocus membranes and the skin, as Redlich recently indicated, rest upon similar inferiority of other organs. Moral deterioration, criminality, chronic alcoholism, may arise from this cerebral inferiority, but not epilepsy. Decided mental predisposition, genius which Lombroso has brought to the foreground, may be considered as over-compensation in an inferior brain. It is this inferior brain which may be inherited. In order to lead to epilepsy, there must be further determinations. Criminals, drinkers, imbeciles, inventive people, geniuses, apparently healthy people, who however frequently reveal peripheral or partial forms of inferiority, have to alternate in such families till this stock is destroyed by external circumstances or until an equilibrium is reached which guarantees better vitality.

Take for example the *L. family:* The father died of carcinoma of the bladder, the mother was mentally inferior. There were two sons, of whom one was feeble-minded with asymmetry of the skull, the other normal. Of five daughters the oldest is afflicted with renal calculus, one of her children wets his bed. The second suffered during her childhood from enuresis and catarrh of the bladder, later in each pregnancy—three times—from pregnancy pyelitis. The third is an epileptic, the fourth an imbecile, the fifth normal. Of the children of the second daughter, the first shows slight symptoms of enuresis, the second has deformities of the skull, the third suffered from spasm of the glottis. In this family accordingly, a combination of inferiority of the urinary apparatus and of the brain plays its unfortunate part.

The analysis of the conditions of heredity in tuberculous cases proves itself equally fruitful. The justification of the problems of heredity in the tuberculosis question is pretty well recognized. It becomes still more clear on accepting our viewpoint, as long as one does not seek in the ascendancy only tuberculosis of the lungs but lays greater stress on the inferiority of the whole respiratory tract, and takes the same attitude toward diseases of this apparatus. Then bronchial asthma, emphysema, diseases of the larynx, of the pharynx, of the nose, also fall into the range of the anamnesis. For just as the inferior brain in epilepsy is transmitted so it is the inferior respiratory organ in tuberculosis, which reveals deficiencies at most diverse places, and in the most widely different forms. We may not leave the complicating diseases unmentioned either. The connection between gastro-intestional affections, hysteria, goiter, alcoholism, and albuminuria is sufficiently clear. It would lead us too far afield to give a complete explanation of this connection at this point.

As a result of my investigations, I can allege, that in all these cases, to which we must also add smallness of the heart and of the arteries, it is not a question of pure connection of a casual nature, but has to do with inferiority in a second organ appearing at the same time. Localization in the apex of the lung is particularly interesting. It may be best explained, in our opinion, by accepting a particular inferiority at this point. The Frankel constriction of the upper thoracic opening, the prominent angulus ludovica, the phthisic constitution, the deficient development of the areola of the nipple on the diseased side, emphasized by Sorgo and Schick, are nothing more than peripheral indications of the inferiority of the respiratory organs, and are surely not to be valued etiologically, any more

than the diminished exchange of air at the apex. All these signs are not found in phthisis subjects only, but are none the less suspicious factors. The striking size of the lung in phthisis gives emphasis to the factor of growth tendency in inferior organs of which we have already spoken. One can not avoid a similar impression in watching the growth of giant cells. On the other hand the part of the tubercle bacilli as well as the social conditions are assured to be determining factors.

E. family: The father has emphysema and chronic bronchitis, the mother died of hemorrhage, in a premature birth. Of the sons, the elder is healthy; the younger in his twenty-third year became ill with pleuritis on the left side, affection of the apex on the left side and albuminuria. He suffered from chronic coryza, swelling of the pharyngeal tonsil and of the turbinates. The older sister suffered from spasmodic sneezing (unfortunately we can get no report about it) and in her thirty-fifth year underwent an operation for myoma. The younger sister in her childhood suffered from enuresis and frequently had nasal catarrh and recurring laryngitis. The older sister is childless, the younger had three difficult births, in which hydramnios was present with extraordinary large children. There were no noteworthy change in the pelvic measurements. In this family may be listed, inferiority of the respiratory organs in different places and in different forms, also inferiority of the sexual organs of the female members. If I add that the father and paternal grandfather suffer from catarrh of the bladder owing to hypertrophy of the prostate [*prostats=uterus masculinus?*], we will have to grant inferiority of the urinary apparatus also, considering bed-wetting and albuminuria of the younger children at the same time, an inferiority which like the others is of account in heredity.

There is a whole list of diseases which can be passed down by heredity, which I can either omit or else mention briefly because they have little weight for the material which is to be demonstrated in this chapter, or else can not be verified by me with sufficient material. Such is the case in diabetes, the hereditary significance of which is universally recognized. The assumption of an inferiority of the pancreas, also, regarding its nervous connection with the medulla oblongata would meet with only slight opposition. The principle determination seems more important to me, namely that in diabetic families the alimentary tract is inferior, a fact which may, in the individual family members, not always come to light in the pancreas, but in various parts and with varying strength in this apparatus and its appertaining portions, in the mouth, teeth, pharynx,

stomach, liver, intestine, and rectum. In this connection I consider it necessary to call attention to the numerous gastro-intestinal complaints found in diabetic cases, and particularly, to the frequent lack of palatal reflex which indicates a deep-seated change in the whole alimentary tract. The connections between diabetes and obesity, gout and formation of gall-stones, and the alternating appearance of these diseases in individual families can only rest on the common foundation of inferiority of the gastro-intestinal apparatus. Other groupings, such as tuberculosis, disease of the vessels, skin affections, renal changes, Basedow's disease neuroses, which are often found in diabetic subjects, we shall regard as an expression of the simultaneous inferiority of a second organ, which may be more or less burdened by the diabetic disturbance of metabolism.

For example in his thirteenth year, *O. C.* became ill with severe diabetes. In his early childhood up until his fifth year he suffered from involuntary defecation, later from constipation and diarrhea. In his twelfth year severe furunculosis set in, which aroused suspicions of diabetes. The father suffered from gall-stones in his youth, was inclined to obesity, and has for many years been tormented by stubborn constipation. The mother shows numerous recurrences of urticaria. A sister has hysteria. The analysis of the case follows from the previous one. The inferiority of the intestinal apparatus comes from the paternal side, which is distinguished everywhere by obesity. To this the mother adds the inferior skin, which furnishes the ground for furunculosis. Not one of the four members of the family shows a palatal reflex and the pharyngeal reflex can only be obtained with difficulty.

A theory of diabetes must rest on the acceptance of an inferior pancreas. The deficient pathologic reports in this disease make for a preponderating functional inferiority, which might make itself felt in anomalies of secretion. Yet at times a morphologic inferiority (of the parenchyma, abnormal smallness of the islands of Langerhans) can be definitely proved. Thirdly the inferiority may be situated in the nerve connections of the pancreas.

Case of Dr. G.: The father suffered from exophthalmic goiter. The son has been afflicted since his childhood with severe diabetes. Thyroid gland intact. Here we find inferiority of two organs at the same time, without being able to say anything about their mutual influence. This case requires us not so much to connect exclusively the sugar secretion with the thyroid in the not at all rare glycosuria in cases of exophthalmic goiter, but rather to accept a simultaneous inferiority of the pancreas.

In regard of obesity, I must emphasize at this point that it has been emphatically proved to be hereditary. This, as well as its connection with other diseases, namely the simultaneous inferiority of other organs, is sufficiently well known.

Diseases of the lymphatic glands are not considered hereditary as far as I know. The reason for this is in the following: As soon as tuberculosis has been determined in an organ, in many cases all further interest seems at once to die out in the investigator or else is directed to the modes and means of spreading the infection. We are however interested above all in the fact that tuberculosis may attack every inferior organ under certain conditions. The inferiority of the lymphatic glands, which is surely of the greatest importance in the further advance of tuberculosis, is inborn and hereditary. Two cases will serve as support for this view.

1. *Alfred B.* in his sixteenth year became ill with numerous swelling of lymphatic glands of the neck, all of which showed softened, puslike, disintegrated material and which healed with the well-known scrofulous scars. Neither the patient nor any one else in the family showed signs of tuberculosis. But the mother in her fifteenth year had aslo had swellings of lymphatic glands of the neck and showed a few scrofulous scars.

2. *Frieda H.,* fifteen years old, had always been well up to the winter of 1905. At that time she suffered from countless tumors of the lymphatic glands which particularly filled out and caused the supraclavicular depressions to bulge. To this pleuritis on the left side, and later, swellings of the lymphatic glands under the left axilla were added. Her parents and brothers and sisters are healthy, and have never suffered from swellings of the lymphatic glands. But an uncle on the mother's side did have them. The patient's older sister has a nevus pigmentosus (see previously) in the left supravlavicular hollow. The mother also.

In such cases we can only speak of inherited inferiority of the lymphatic glands, not of hereditary tuberculosis.

Following this conception we find ourselves forced to draw the following important conclusions, which have a bearing on tuberculosis as well as on all other infectious diseases.

1. All infections which may be overcome by the natural protective power of the organism threaten most of all that organ which has least of this protective power and which in the majority of cases is the inferior organ.

2. In tuberculosis especially a therapeutic result is only to be hoped for in so far as it is possible to promote the inferior organ

far enough for it by its own strength to overcome the infection. As far as therapy with sera is concerned, the greater chances fall to active immunization. Only in passive immunization can individual parasites remain viable, and the inferior organ again falls a sacrifice to the next spread of infective material.

We do not wish to close this chapter without taking into consideration the question of carcinoma in so far as it belongs here. In this it is of little importance whether we pursue the question according to the parasitic or non-parasitic etiology. We only remove the etiologic moment a layer deeper. *Carcinoma can only be developed in an inferior organ.* Further conditions are unknown so far. A list of facts supports our conception which is most closely allied to Billroth's work on carcinomatous predisposition. There is also the development of carcinoma in the previous history of the diseases of the organ. The present conception regards previous diseases as of importance etiologically; we, however, according to our discussions consider them as of historic importance. All the changes of the organs in the anamnesis of the carcinoma, whether of catarrhal, inflammatory-infectious nature, of hypertrophic or atrophic character, all prove this organ to be primarily inferior. I have spoken of that in this chapter. Furthermore I call attention to the remarkable variability and growth energy of carcinoma cells, which reveal a capacity similar to embryonic growth. Of the same sort is the condition of giant cells and also embryologic tissue. I have already emphasized the significance of nevus. I consider its relation to inferiority to be quite definite. Its relation to carcinoma has long been a well-known one. Besides I can introduce here the whole Cohnheim argument and the collection of illustrative cases connected with it, with the exception, that I have to drop the idea of "scattered embryonic germs" and substitute in its place organ inferiority, with its very nearly embryonic character. The hereditary significance of carcinoma also I think can be proved, to be sure, in another sense from that which other authors give it. The inferiority of the organ, not the carcinoma, may be inherited. There are other things required for the origin of a carcinoma. The inferiority of the organ can however be proved from the genealogy.

Mrs. A. B. was taken sick in her fifty-eighth year with carcinoma of the left breast. Her daughter, Mrs. L. T., showed deficient development of the nipples on both sides and was incapable of suckling in spite of all efforts. As a striking feature, note that a fairly thick circle of hair surrounds both nipples, a condition which reminds us of the hairiness in spina bifida, another morphologic inferiority.

Mrs. Theresa S. died in her forty-sixth year during an operation for carcinoma of the uterus. Her son as well as her daughter's son suffered from enuresis. The daughter has attacks of vomiting and diarrheal stools whenever she is the slightest bit vexed. This case offers proof only for those who accept with me the law of manifold inferiority of organs and follow my view still further, according to which enuresis as well as stomach and intestinal neuroses rest on functional inferiority of the related organs.

The case of L. (see above) might also be quoted here.

Case of J. K.: Sensibility to pressure in the gastric region, radiating pains to the left as far as the region of the left shoulder blade, heightened spontaneous pains after taking nourishment, vomiting. A pale person, a cook. No palatal reflex, pharyngeal reflex positive. Father died of cancer of the stomach. Here also the inheriting of an inferior organ reveals itself, but also the choice of profession, influenced by the fundamental inferiority of the digestive organ, all of which is to be discussed later (V), and the deficiency of the palatal reflex, a sign of the inferiority of the alimentary tract which we still have to discuss (IV).

Case of Mrs. Nadja J.: For four years she suffered from hysterical attacks, which were accompanied by unconsciousness. On her right cheek, at the height of the nostril and about 2 cm. sideways from the nose, we find a nevus pigmentosus. Her mother had been operated on two months before for carcinoma of the left superior maxilla. Here it is evidently a question of segmentary (of which more later) inferiority in the region of the upper jaw, the presence of which in the family is revealed in the mother and daughter.

To conclude, I will briefly point out that the great majority of carcinomas are found in such positions as have been specially named by Freud erogenous zones and which he has brought into close connection with the neuroses. Such zones are mouth, anus, breast, genital region, etc. The connection between neuroses and inferior organs is discussed in another place.

The other branches of the heredity theory may be classified in a similar manner. I have myself found myomas in mother and daughter, and in sisters. If one holds to the ideas already outlined the inferiority of organs can often be traced in the genealogy.

I pass over the whole list of diseases conceded to be hereditary, but must point out briefly that in a great number of these, not only just in the center of the disease but in the region of apparently healthy organs, trustworthy observers have indicated changes of atrophic or

hypertrophic nature. One can not challenge such a report unconditionally. But it is in the nature of the thing that in an organ inferiority subject to inheritance, not only individual portions of the organ predestined as a center of disease show the character of the inferiority, whether it is pure or especially functional or morphological, which last phenomenon is to be considered as a reaction of the inferior material under the relatively greater vital irritation, but also adjacent or more remote elements of the inferior organ. Now there would be nothing more out of the way than to insist upon finding again all the anomalies of the ancestors to the same extent in one of the descendants, in an investigation on the nature and compass of heredity. Just as heredity can appear at different parts of the organ, where it is found in the form of functional or morphological inferiority, which gives footing for any sort of disease of a parasitic or non-parasitic nature, so the fact has to be reckoned with that in later life, under the influence of the manner of living, inferiority unconcealed or revealed by illness, will not always be found. Perhaps it happens just as often that in place of the expected inferiority, nothing abnormal or directly an excess, or even an exaggerated peculiarity is found.

CHAPTER III

Anamnestic Demonstration

In the above we have repeatedly thought of the difficulties which at times stand in the way of classifying an organ as inferior. As we use it the idea of full normality on the part of an organ is not at all the same thing as the term health and for the following reasons. There may have been, either by reason of appropriation of reserve growth power at the place of the inferiority itself or more remote from it, in a second organ or in the nerve track, compensation, which has hidden the deficiency, and even conceals it from the medical investigator. Or else the inferiority reveals itself in one member of the family in a place where there is little or no disturbance in the healthy functioning of the organ. In another member the inferiority may appear as a disturbance of health. Or else the favorableness of external conditions, public and private hygiene, enable the individual burdened with an inferiority to escape dangers to health, which present themselves at once when the social position, working time, home or nourishment, become worse. To be sure here is a question of a lesser degree of inferiority. The higher degrees condition either incapacity for life or else are actually hidden by the so-called "diseased" organ.

I wonder whether there are any critera for distinguishing "healthy" organs from inferior ones. We have already shown how the theory of heredity may serve us as a clue. According to our conception an organ may be found to be quite healthy, but inferior owing to its heredity. In such cases it is absolutely necessary to get the history of youth, or perhaps, better still, the childhood history of the organ, because at times it is possible to determine the inferiority which escapes the perception the moment compensation sets in. As soon as the inferiority of an organ comes into account, before compensation in early childhood, it appears preponderatingly as a functional deficiency or as a deficiency in functional control on the part of the child. Besides the diseases from which the child has recovered, the anamnestic significance of which is recognized, the same attention is due to the development of the sensory functions and the vegetative organs, to learning to walk and talk, to the control of childish errors. Even with very little ma-

terial the significance of this anamnesis in childhood seems determined. And in a special example of childish fault, namely bed-wetting, we will furnish at the close, proof of its significance and a few illustrative cases given which show the relation to organ inferiority. If we add the conception maintained in the discussion of problems of heredity, we have, as further basis of investigation, the principle that a fault of childhood in the inheritance, in parents, children, brothers and sisters of the patient should be regarded as a suspicious sign of the inferiority of the organ relating to the fault. The same is true of compensation or over-compensation which can be proved in heredity.

Of the anomalies of childhood development which are found in the history constipation, vomiting, blinking, squinting, stuttering, sucking the thumb, and lack of control of the bowels or of the urine should be particularly emphasized. Furthermore it seems of importance to emphasize the fact that the infantile trace of organ inferiority frequently impresses itself as a functional failure of the organ in domestication. This demands the control of organ activities and at the same time the giving up of the pleasurable sensation which unhindered organ activity brings. The limitation of organic sensory pleasure for the benefit of cultural progress becomes the test of organic normality. At other times the domestication [Hansemann] requires functioning under limiting conditions, with insufficient air, unsuitable food, poor light. The harm which this does the child affects primarily the inferior organs, which are not equal to such a strain on their function. Deficient growth of bones, of the organs of respiration and circulation, the digestive apparatus, the central nervous system, of the blood organ, are caused thereby.

In other, more fortunately situated cases, a functionally superior formation gets the patient out of difficulty. *A particular viewpoint has taught me how often a morphologic or functional dificiency of an organ is converted to a higher development of that organ.* The stuttering boy Demosthenes becomes the greatest orator of Greece, and up to the present day we seldom find any such heaping up of defects of speech and signs of degeneration of the mouth, as are observed in orators, actors and singers.

The anamnestic significance of childish faults in neuroses has already been emphasized, and accentuated in its full importance by Freud. It yet remains for us here to refer to the tendency to greater sensory development, found in the peripheral part of the inferior organ especially, portions of which are exposed near the skin surface. In part this increased sensibility, the starting point

of many child-faults, surely comes from the impotence of the inferior organ which can not of itself follow the safe pathway of cultural functioning; for it is the cause of every organic activity, while the cultural organic function draws its strenggth from repressed sensory pleasure. How closely this raising of the sensory component is related to the embryonic nature of the inferior organ I can not determine definitely. *But it is true that the ensemble of phenomena of organ inferiority is reflected on the psyche in such a manner, that its whole structure has a peculiar impression. The psychical structure thus obtained becomes a foundation for neuroses and psychoses.*

Whereas scarcely a single case of neurosis is without such a history from childhood, to which Freud has already made specific reference, I can only offer scant material, aside from the illustrative cases following in the conclusion. Yet in a number of cases, for instance in diabetic subjects, I could be sure, that since earliest childhood, intestinal function was not what it should have been. I often found constipation present, more rarely involuntary defecation. The frequency of gastro-intestinal disturbances in developed diabetes justifies the theory that this disease depends upon a hereditary inferiority of the gastro-intestinal apparatus, which appears predominantly in the function of the related gland, the pancreas and at times in the liver also. A few cases to justify this assumption.

Margit B., 25 years old, complains of headache and chronic constipation. Eight days previously, as had often happened before following excitement, she had an attack of diarrhea, which after two days changed to constipation. The constipation has now lasted for six days. The patient feels miserable, suffers from nausea, agitation, frequent attacks of fear and violent strangury. The patient declares that she has been in the same condition several times before. The examination gives us a relatively scanty result: the abdomen shows slight meteorism; no sensitiveness to pressure, no rise of temperature. The analysis of the urine is negative. The patient never had any spontaneous pains, no vomiting. The internal organs are healthy. The lack of palatal reflex and of the abdominal reflex is very striking. The pharyngeal reflex is weak, the conjunctival reflex normal. The anamnesis gives the solution. As a child the patient was very unruly and had often suffered from headache and constipation. When she was fifteen she had violent attacks of singultus. The patient lisps. The father died of diabetes, one brother was an enuretic and suffered from this as well as incontinence of the bowels till his twelfth year. One sister was unfortunate

in her marriage and at times has attacks of coma. From the analysis of this case we would like to emphasize the hereditary organ inferiority in father, brother and patient and the distinct indication of the early history, constipation in the patient, incontinence of the bowel in the brother as well as lisping in talking, which according to the report of the patient was particularly evident in childhood. The condition of the patient, who accordingly shows a startling intestinal inferiority, belongs, in the presentday nomenclature in the realm of hysteria, the development of which is however very slight. In the sister this side of the aspect of the disease seems more clearly developed.

Richard v. R., a healthy man of 30 years of age, suffered in his fifth and sixth years from violent blinking. Later this very prevalent defect of childhood vanished without leaving any traces. No eye diseases in the family. One brother, Julius v. R. is a well-known, very skilled painter, who told me that he had had exceptionally sensitive eyes as a child, and epecially, he had not been able to stand a bright light. In his seventh year he had a lengthy attack of lymphatic conjunctivitis. This case is interesting in two respects. It shows that an organ inferiority may be present in a family without any particular disease. On the other hand we find here the high degree of development of an inferior organ in the eye of the artist.

Mrs. Elsa S., 24 years old, suffered till late in her childhood from violent blinking. One brother of this woman is myopic to a very high degree, the father towards the end of his life was almost totally blind. Here also we find scattered throughout the family, in different forms, the indications of inferiority.

Alexandra E., 5 years old, is being treated for recurring catarrhal conjunctivitis and blepharitis squamosa. For two years there has been blepharospasm, lasting for some time and then disappearing for a long time, appearing at intervals which have no time relation to the state of irritation of the eyes. The mother had been operated on as a child for convergent strabismus, and has astigmatism on both sides and a slight degree of myopia.

CHAPTER IV

Morphologic Indications

Our consideration of the inferiority of organs places the beginnings of the inferiority in the period of embryonic growth. Thus the significance of heredity and "childish faults" is comprehensible in the widest sense of the word and their connection clear. The determination of organic disease, heredity and childish anomalies, makes possible a proof of organ inferiority in many cases, and in other cases permits one at least to express a suspicion. A further diagnostic aid, whose significance is connected with that of the other three, lies in the discovery of morphologic arrest of development, malformation, "signs of degeneration" which we have already designated everywhere as morphologic inferiorities.

The organ inferiority usually enforces itself genetically in the individual and hinders embryonic or functionally related parts from fully developing. Usually one can conclude an insufficiency in a second or third organ at the same time, which seems comprehensible since the causes of organ inferiorities can be referred to an extended deficiency of formative substance. Pathology reckons with degeneration of the internal organs in certain cases. Outside of these cases of disease we have found a peripheral expression of organ inferiority in childish defects. *If now a trace of this embryonic check comes to the outer portions of the body and reveals itself in this manner to the investigator this happens in the form of the universally known signs of degeneration,* about which there is to-day a great number of observations and interpretations. Their value is not uniform. As far as I can see, however, the conclusions which follow upon the nature of the signs of degeneration, are entirely too general or else limit themselves to emphasizing the degenerative tendency of the whole person, the inferiority of his total organism, above all his psyche. This precipitancy has brought a great deal of discredit to the theory of degeneration, and recently people have been trying to prove statistically its indefensibility, in this form. To prove less would prove more. What we can affirm with greater surety in regard to signs of degeneration, is, that they represent the external traces of the organ inferiority, which may be found in a similar manner in the whole organ or in single parts of

it. If we add besides that some of these external traces may fail in spite of organ inferiority, that the degenerative tendency may extend to another organ, that the stigmata of inferiority may belong to the internal organism or may consist of decrease of function, and, as shall be pointed out later, of the related reflexes, we can consider the limits of a "degeneration theory" as known to-day, as sufficiently outlined.

The significance of the discoverable, external signs of degeneration is undeniable in this outline. Their relation to the organ in question and the necessity resulting from this of assuming further signs of inferiority in the whole organ, appears to be sufficiently justified and will be illustrated in the following by individual examples. The probability arises that in such cases there had not been enough formative material to finish the organic development in complete harmony and with sufficient tectonic. And the suspicion can quite rightly be directed on the central portions of the organ, and one can ask whether the deeper or related parts have remained morphologically or functionally backward, in which case the functional deficiency would be considered in general the lowest grade of primary organic check, the morphologic hypoplasias or aplasias as the highest degree. The injuries growing on this weakened ground cannot, to be sure, be graduated in a like manner, in the first place, because functional and morphological deficiences may combine in different degrees, in the second place, because exogenous disadvantages, such as infection, determine in a marked degree the severity of the disease. To this is added the fact, to which we have already referred several times, that under favorable external circumstances, or as a result of compensation, the inferiority of the organ may be hidden or even overcome. As to functional checks we must expect above all, in addition to motor weakness, scanty development and failing of reflex actions, microreflexes, and quantitative as well as qualitative changes in glandular secretions.

The frequent report of external signs of degeneration in apparently normal people shows us then nothing at all surprising from this point of view. The external stigma can, we think — by itself — signify a unique deficiency in the development of the organ. But even when the related organs participate in the inferiority, the deficiency, in so far as it is compensated to a lesser degree or appears compensated by means of other aids, can be endured fairly well. Only one must not conclude from this, as individual authors sometimes do, that one should deny a value of orientation to the signs of degeneration. On the contrary! The physician will learn to

deduce from them the lesser capability of resisting of the hitherto still functionally capable organs, and to guard against sudden injuries. And just as in the discussion of functional inferiority we must emphasize here too, how often organs of slight inferiority may develop greater functional capacity than normal organs. The *cause lies in the compulsion of a constant training in the capacity for adaptation and variability often adhering to inferior organs and surely also in the development of the related nervous and psychical complexes heightened by inner attention and mental concentration upon the weaker organ.* The last named compensatory development of the nerve track comprises also, among other things, the development of reflexes, of a special protective arrangement and mobilization of the organ.

This is not the place to give an extended representation of signs of degeneration as I see them, as peripheral stigmata of organ inferiority. My own collection of illustrative cases would be too slight. Literature at all events gives us sufficient authority for this conception. I shall only refer to a few of the most important stigmata as they presented themselves to me in connection with organ inferiority. Congenital or herditary abnormal development of the yes, the eyelids, pigmentary anomalies of the iris (Fuchs), lamellar cataract, congenital constriction of one palpebral fissure, myopia, hypermetropia, strabismus are often found in people who contract other affections of the eye, retinitis, choroiditis, detachment of the retina. Functional defects are often accompanied by morphologic anomalies. An affection in one eye is frequently followed by another in the other eye, the heredity of anomalies of the visual apparatus and of affections of the eye is undoubted. The early history is almost always faulty. Very striking is the fact that so many suckling infants show strabismus for a shorter or longer time, and some time after birth. It would not be surprising, in cases of striking functional or artistic capacity of the eyes, to find functional or morphologic anomalies of the outer eye in the individual or in his family.

A similar thing may be asserted of the affections of the auditory apparatus in connection with anomalies of the outer ear. Here also heredity plays a notorious part, and can be considered a certainty, for example in regard to deaf-mutism and otosclerosis. At all events, from my point of view only, it is the inheritance of an organ inferiority which manifests itself in different forms and in different places. This was the case in the S. family, which I have had under observation, in which three of the children suffered from

otosclerosis while the other two showed marked musical ability. The last may be explained by the oft-repeated reference to the over-compensation in an inferior organ. One of the brothers had a frequently recurring herpes of the auricle, which, as soon as I saw him, took on importance as an indication of organ inferiority (of the mouth, nose, urinary or sexual organs). Musicians frequently suffer from ear affections, or else have suffered from such in their childhood. Beethoven is the classic example. Mozart is supposed to have had a deformed ear. Veterinary surgeons have abundant opportunity to prove affections of the ear in dogs with hanging ears.

In a like manner the stigmata of the nose, hypertrophy of the mucous membrane, polypi, adenoid growths and the anomalies of the mouth, tongue, teeth, of the hard and soft palate, of the tonsils, are connected with inferiorities of the respiratory apparatus and the inclination to disease in the same. Individual authors have, without going into the details of the connection, emphasized this relation. Perhaps the opinion most respected is that in which is stressed the connection between the anomalies of the nose and bronchial asthma, and between adenoid growths or hypertrophy of the tonsils with a lesser degree of development of the thorax and the lungs. I do not need to explain minutely that primarily only the condition of coördination is admitted; but later when the function or the hygiene of deeper lying parts of the breathing organs are encroached upon by certain conditions of growth, the peripheral stigmata also appear to be etiologically conditioned. Deviations of the septum, arrests of development in the formation of the mouth such as cleft palate, long frenulum linguæ, poor teeth, anomalies of the teeth, inferior, easily bleeding gums, and a high palate are often the visible expression of an inferiority in the respiratory tract, which does not always of course appear as a special disease form. Heredity and childish anomalies are however often perceivable, among the latter of which are particularly, stuttering, sucking of the thumb, sucking the lips and all sorts of defects of speech. Likewise with such children catarrh of the ear passages, false croup and sore throats are often found as Gutzmann and others have already pointed out. An accumulation of these peripheral stigmata is not rare. In anticipation I must say that the palatal reflex also very often undergoes changes in which it shows itself as lacking, very weak, or increased, whereas the pharyngeal reflex according to my examinations shows this connection more rarely. In a like manner these stigmata are found very noticeably in neuroses, with singers, speakers, and in connection with severe diseases of the respiratory

tract, be it in the patient examined or among his relatives, and along this line I might especially emphasize pulmonary tuberculosis.

Miss L. shows on her upper lip, in the position of the left embryonic palatal cleft, a small ridge-shaped thickening which seems to be colored bluish by dilated blood vessels. The ridge is congenital. The anamnesis tells us that the young lady often suffers from laryngeal catarrh and bronchitis, whereas the father, mother, and one brother died of pulmonary tuberculosis. Palatal reflex lacking. The patient shows slight neuropathic characteristics, which have to do with the digestive tract, and often suffers from palpitation of the heart, sleeplessness and lack of appetite. She is an excellent singer (soprano). One sister has attacks of anxiety and at 42 years of age still shows a defect in speech in the form of lisping. In regard to this case I should only like to emphasize that to me the impression of the connection between a beautiful singing voice and the organ inferiority which I have outlined is a definite one, and that I have considerable material to support it.

Marie B., 12 years old, came under medical supervision on account of stuttering and lisping. Her father died of pulmonary tuberculosis. As a child the brother stuttered also, and was at that time being treated for cervical vetebral caries. Mother apparently healthy. The patient shows strikingly poor teeth, hypertrophy of the mocus membrane of the nose and adenoids. Progress at school poor. Palatal reflex deficient in the patient and her brother.

Josef S., 50 years old, suffers from follicular tonsillitis which frequently recurs. Since his fifth year, the patient has had numerous attacks of bronchial asthma, again which he has hitherto fought in vain. Polypi of the mocus membrane in the nose, adenoids and hypertrophic tonsils had been removed by operation. Of the other stigmata only prognathism was found. In his seventh year the patient had pneumonia and costal pleurisy. The thorax of this strikingly large man is narrow and only slightly arched. At the height of the posterior, left-hand end of the lung there is an angioma as big as a hemp seed. The patient's father had suffered from nasal polypus and once had pneumonia. A brother who also showed prognathism died of pneumonia. The patient's twelve-year-old daughter recently had pneumonia and costal pleurisy, a son had to be trachetomized in the course of an attack of diphtheria, a second son was operated on a short while ago for hypertrophy of the tonsils. The analysis of this case accordingly shows as a foundation for asthma, a very well substantiated hereditary inferiority of the respiratory apparatus, which also expresses itself peripherally

in individual members of the family in the appearance of congenital stigmata. I should like also to add briefly that just as in the case of nevus a well-deserved place should be accorded to telangiectasis and angiomas in the ensemble or organ inferiority. Years ago some one declared that here was a connection between angiomas of the skin and carcinomas of the internal organs. The connection is this, namely, that an organ inferiority is the basis of them both. The author in question went too far. The complete denial however with which his statements were met seems unjustifiable to us. The position of the nevi, telangiectasis, angiomas, in short all the congenital skin anomalies in the question of inferiority will be touched upon again at the end of this chapter.

In the above I have tried to picture the connection between the stigmata of the mouth and the inferiority of the respiratory apparatus. But there is no doubt that they are in just as close connection with the inferiority of the digestive apparatus; the common peripheral orifice of two organs will preserve the power of one of the two, or of both. My experience now leads me to think that all these stigmata of the oral portions may often serve as clues for the discovery of inferiorities of individual components of the gastro-intestinal apparatus, just as is frequently found in diseases of related sections of organs. This study of the matter cannot give a complete picture of the relation. It must however be pointed out that diseases such as appendicitis, diabetes, obesity, alcoholism, ulcus rotundum, diseases of the liver, according to my experience belong in this outline, and that the same argument must hold for carcinomata and tumors of the nutritive tract. A few of these connections have already become truisms in medicine, even if their significance, in my opinion, is incomplete and must first be borrowed from the inferiority theory. The same is true of the connection between bad teeth and gastro-intestinal disturbances, as the relation between *angina and appendicitis, recently stressed by Kretz, which we regard as diseases coördinated in one inferior organ. A coated tongue likewise has significance in gastro-intestinal affections.*

Hernias and stigmata which are grouped about the anus, such as hemorrhoids, fissures, prolapse, have the same significance, the connection of which with organ inferiority may often be proved in oral stigmas, childish defects, reflex anomalies, and neuroses in the family, the connection of which with diseases in the stigmatized organ often may be recognized in the family, at least, in the above mentioned manner.

Albert F., 32 years old, singer of comic opera songs, acquired

lues four years ago and since then has been troubled by hypochondriacal moods. His father suffered for many years from gallstone colic, his mother died of carcinoma of the stomach. The patient had always been well before and once only was in the care of a specialist on account of a "singer's nodule." At present there is a herpes on the upper lip, which, as the patient says, often recurs. Palatal reflex lacking, pharyngeal reflex diminished. All the patient's incisor teeth are crooked, two upper incisors lacking. These tooth anomalies must be considered as external signs of degeneration, corresponding to an inferiority of the digestive tract in the family; father and mother suffered from severe diseases of this apparatus. The significance of the herpes has already been touched upon, the pharyngeal reflex anomalies point to the similar inferiority of the respiratory apparatus, to which is added as further evidence of inferiority, singer's nodule and deficient palatal reflex. The patient's profession leads us to the same conclusion. We must regard the "singer's nodule" as analogous to many other anomalies in its rôle as stigma, which betrays to us the inferior organ, the same organ which forces its possessor into the profession of a singer or speaker.

The following case seems typical to me: *Ignaz C.,* a merchant 50 years old, has for many years suffered from obstinate constipation. He belongs to a corpulent family in which, as it happens, constipation is not predominant. Ever since his youth the patient has been bothered by anal fissures, which have hitherto defied all conservative treatment. One son showed epignathy and died when he was fifteen in diabetic coma. The childhood anamnesis of the son showed incontinentia alvi up to his fifth year and lisping as a defect in speech. In the father there is deficient palatal reflex, the same in the daughter, who is ill with severe hysteria and who shows a shortening of the upper lip. In this case we find in addition to oral stigmas in the son and daughter, with which this chapter deals, connections, which are mentioned quite often in works on this subject, but which have not been explained. We mean the relation of diabetes to obesity, to neurosis and to dental defects. An inferiority of the nutritive apparatus may lie at the bottom of all three, which I have often proved to my own satisfaction, and which in the first case compensates within itself, and appears to be overcompensated, and in the second case (of which more later) involves the related nerve track and manifests itself undisguised only in the third case. The deficient palatal reflex found with it suggests to us an inexact development of the related reflex apparatus, a check which can be further indicated in diabetes by a deficiency in the patellar reflex.

The peripheral stigmata do not have to be of a particular sort at all. Any other conclusion but that of inferiority of the nutritive tract is, as has already been emphasized, inadmissable, and complete knowledge can only be won from the great number of symptoms of inferiority, which in general is not so very difficult. The following case in an example.

Käthe H., 24 years old, lost almost all the teeth in her upper jaw five years ago, and now uses a set of false teeth. The patient has come under our care on account of loss of appetite, which has already lasted for 6 months. There are neither spontaneous pains nor sensibility to pressure. During the six month period of want of appetite, vomiting has occurred three times, and this also without pain preceding. The patient says that once, four years ago, she vomited blood. As a child she suffered with frequent vomiting and at times would faint from nausea. The present sickness is supposed to be related to violent excitement. The report on the internal organs was negative. From the symptomatology of this want of appetite we must still emphasize a particular distaste for meat. The emaciation during the sickness is given as a loss of weight of about 6 lbs. Palatal and pharyngeal reflexes were heightened. The case had the appearance of a gastro-neurosis, and ran along with slight improvement till suddenly, two months later, intestinal colic, violent vomiting, and intense sensibility to pressure in the region of the appendix set in with fever. After the diseased appendix was removed by operation, there was complete recovery. Now there is vomiting only at times and in conjunction with migraine.

The analysis again shows us the peripheral findings, reflex anomalies of the palate, such as I have occasionally found in ulcus rotundum and appendicitis—usually heightening, rarely deficiency, in the palatal reflexes, the anamnesis reaching into early childhood and—a fact which explains the relative rarity of the case—disease in different parts, in the teeth, the stomach, the appendix. In the literature we find references to gastric hemorrhages in appendicitis, which, as in the above case, in which the periods of sickness were separated, we must lead back to the unity of a gastro-intestinal inferiority. But the connection of neurosis also with appendicitis makes this case remarkable. The anamnesis at least portrays childish hysteria and the loss of appetite preceding the appendicitis looks like a neurosis. The distaste for meat is very striking, a sort of psychical defence of the inferior organ, which we also recognize from the symptomatology of carcinoma of the stomach, another disease on the organ inferiority basis. Here I should like to em-

phasize the fact that this physical defence arises from a compensation in the central nervous system, which may be put on a level with the increased palatal reflex.

In general the dental formation and its deficiency is an important index of the inferiority of the nutritive tract. Even in rachitic children the coincidence of poor or late dentition and gastro-intestinal disturbances is a fact, the pursuit of which promises interesting results. In connection with this I shall only mention the frequently occurring obesity, which seems to me to be a result of the over-compensation of the inferior stomach, intestine and its dependencies, and not only in rachitic children but in grown-ups as well. I have repeatedly found in higher degrees of adiposity all the indications such as I should expect in intestinal inferiority or at least various signs of it. The same is true in heredity and in the corresponding stigmas in heredity, or diseases, which had occurred in the gastro-intestinal tract. Likewise constipation or involuntary evacuation of the bowels in early childhood. In my small collection of cases illustrative of diabetes there is a great deal of material touching this, for the connection between diabetes and obesity is well known on all sides. Furthermore one can also frequently find palatal reflex anomalies which I shall discuss later.

The following case shows many of the connections of which I have spoken:

Friederike U., 6 years old, a child of healthy parents—father is obese and belongs to a family inclined to adiposity—fell ill while out in the country with often recurring diarrhea, accompanied by violent pain. In her second year the patient had had a long drawn out attack of intestinal catarrh. She was being treated by a dentist for prognathism which only appeared in the family in one other case, in the eldest, her eleven-year-old sister, when again, with colic, the intestinal affection now under discussion revealed itself as appendicitis, which the operation proved to exist. Two years ago she had an operation for adenoids and still speaks nasally and with a thick tongue. The palatal reflex in this child as well as in both her sisters was excessively increased. Later on I learned that the father, who had always been a healthy man, had suffered until puberty from nocturnal enuresis and involuntary defecation just as had several of his now very corpulent brothers and sisters. The patient's older sister had suffered from earliest childhood from constipation and promptly shows loss of appetite after excitement at home or at school. She is a nervous child and frequently suffers from headache, and at times complains of colic, without causing a

suspicion of appendicitis to be justified. Anal fissures and sciatic pains often occur and vanish after a short time. The second sister is healthy.

The analysis of this case is simple after what I have said. I must add though, how closely related appendicitis and the so-called pseudo-appendicitis are, a fact which I can prove from other cases. It is the same relation as that existing between neuroses of the stomach and, say, ulucs ventriculi. Both are at times found in one family, and can even pass into each other in individual cases. The proof of the inferior ground is however always found in the way I have suggested.

At the close of the chapter I must mention a phenomenon which apparently does not fit into the scheme hitherto outlined. For my assumption is to establish the meaning of external stigmata as signs of the inferiority of the related organ. *Now there are a great number of external stigmata in which perhaps the acceptance of an inferiority of the organ to which they belong, the skin, might be proved but which, however, unquestionably show a closer relation to their segmentally related internal organs, so that their presence shows an inferiority of the segment, a "segmental insufficiency."*

I have often referred to them in the previous pages. As far as I can lay stress on their part, it is a question of nevi of all sorts, of angiomas of the skin, of externally visible telangiectasis and of neurofibromas. Their hereditary occurrence can scarcely be doubted. The significance of an occasional transformation of a nevus to a carcinoma has already been emphasized in my remarks on the causation of carcinomata on the basis of the inferiority theory.[1] Furthermore I must introduce Virchow's discussions of the fissural angioma as fetal arrest of development and perceive in them a stage in my conception of the indications of segmental inferiority. One can find an abundance of material in the literature which may be interpreted according to my views. I must however put off this fascinating task for some later time. I can not dwell upon the theories of Head either, the connection of which with the conception under discussion becomes clear at once if one accepts with me segmental disease, for which the ground is prepared by segmental inferiority.

I shall now introduce a few striking facts which one can very often find in following carefully the ideas which I have sketched here. I must emphasize first of all that nevi in pulmonary tuber-

[1] As I learn from a report at the time of writing my study, it seems that my conception of carcinoma is very like that of Borst (Würzburger Abhandlungen).

culosis, in the patient or his family, are uncommonly frequent. They are situated in the most varied places on the thorax, on the healthy side, on the diseased side, and are frequently as high up as the zone of the disease or even somewhat higher. One often finds cases like the following:

Wladimir T., 23 years old, a student, has complained for two months of a cough and pressure in his chest, perspires a great deal at night and declares that he has grown very thin. The thorax is only slightly arched, greatest circumference in this man of medium size is 82 cm. Pulmonary sound RHO somewhat retracted. Auscultation shows RHO to RHM soft vesicular rattling in inspiration, and the same, only not as loud, inward from the right shoulder blade. Teeth sound, palate rather highly arched, palatal reflex very much heightened. If the soft palate is touched, the uvula disappears without causing any particular inclination to vomit. Over the middle of the right shoulder blade there is a nevus pigmentosus and it is just about in the projection of the lower rim of the perceivable center of disease. The patient's mother as a girl of 18 suffered from catarrh of the apex of the lung and was finally cured after a long climatic treatment. She is now forty-three years of age and has always been well since then. One of the patient's brothers is now in a hospital at Davos for catarrh of the apex of the lung on the right side.

Johann K., 25 years old, a student, had spitting of blood 6 years ago. A little whole ago he fell ill of dry, left-sided pleuritis. Palatal reflex heightened. *In the thorax in back and in front there were scattered naevi.* This is a very frequent condition.

Hans S., 5 years old, is being treated for intestinal auto-intoxication. Close up under Poupart's ligament there is a nevus the size of a grain of hemp. In the same place on the right his father who was once an enuretic has a testicle which did not descend normally.

I have already referred in the remarks on the carcinoma theory to the case of Nadja J.—nevus on the right above the level of the nostril, and whose mother suffered from carcinoma of the upper jaw on the left side.

David K., 82 years old, before only suffered from constipation (intestinal inferiority) and occasional attacks of colic in the region of the gall-bladder. For a year there has been a high degree of emanciation and loss of appetite. After repeated tests the palatal and pharyngeal reflexes were found to be wanting. In the region of the gall-bladder one can feel a roundish hard tumor about the size of a walnut. The liver is enlarged, a rough structure and pain-

ful upon pressure. There is a 5 per cent. sugar, no acetone, no diacetic acid in the urine, the quantity of which has increased. Somnolence after a few days, from which the patient again recovered, then increasing jaundice and after a month dead. Diagnosis: carcinoma of the gall-bladder. A little beneath and to the side from the tumor is a nevus pigmentosus as big as a lentil and a small skin hemangioma. Two of the patient's daughters show the above mentioned stigmata of organ inferiority, epignathism and faulty position of the upper incisor teeth and are burdened with defects of speech. Similar conditions are not found in the parents.

It would be easy to prove that the diseases of the thyroid gland also originate in the form of an inferiority. We give the following case because of its relation to segmental inferiority.

Mrs. Rosalie G., 46 years old, has had since her youth a cystic struma of the size of a walnut on the right side which has been punctured several times. On the right in the throat and neck there are numerous pigmented nevi, only a few on the left. The patient, who complains of long-standing hoarseness and frequent coughs, shows greatly heightened palatal reflex. General adiposity.

Josef Sch., a broker, 55 years old, complains of constipation and bleeding from hemorrhoids. Complete absence of teeth since his twenty-fifth year. At the left above the open inguinal ring there is a pigmented nevus. No hernia. His son, Paul, 19 years old, has a defect in speech, and suffers from left-sided inguinal hernia.

Albert K., a private, 42 years old, complains of attacks of violent pains in the region of the heart, "as though something were being distended," pains which radiate into the left shoulder joint and into the left arm. The patient had always been healthy. Syphilis is denied, mild drinking admitted. The patient's father was a healthy man till an advanced age, the mother died at thirty-one of pericarditis. Diagnosis: angina pectoris as a result of arteriosclerosis. On the level of the apex of the heart there are numerous telangiectases, which encircle the front left side of the thorax like a ribbon. On the back, at the height of the angulus scapulæ, on the left and the right there are several nevi.

Anton E., a mechanic, 48 years old, had always been well. His father, a well-known physician, died at 62 of a gastric hemorrhage. In the region of the stomach, about a finger's breadth beneath the edge of the thorax, there is an angioma as big as a grain of hemp, and at the same level to the right there are two smaller angiomata.

Wolfgang St., manufacturer, 56 years old, is suffering from be-

ginning arteriosclerosis. In the thirties he lost most of the teeth in his upper jaw, and has worn a false set since then. Palatal reflex in the patient as well as in his two sons is greatly heightened. Patient's father died of pneumonia, his mother of carcinoma of the stomach. Just under the edge of the thorax about on a vertical line through the left nipple there is pigmented nevus as big as a pea. On the left half of the back there are two little neurofibromata, the larger about the size of a pea, a finger's breadth under the angle of the scapula, the smaller one under the scapular spine. After our discussion the idea seems justified that of the two neurofibromata the lower one is an inheritance from the mother, the upper one from the father.

Whoever knew the composer Bruckner will remember that he had a nevus under the zygomatic arch at the height of the lobule of the ear. In this case I might also discover an expression of the inferiority of hearing, which has developed in segmental arrangement. Bruckner as well as apparently all great composers has attained such a remarkable artistic height in striving to conquer the auditory inferiority and transforming it into inventive, creative hearing.

Before we close this chapter, we wish in a certain degree to make the connection with the results of pathology already at hand. As I have already pointed out several times Schick and Sorgo have indicated the connection between certain definite modifications of mammary glands and pulmonary tuberculosis. This condition as well as Fränkel's emphasis on the narrowness of the chest and Rothchild's on the angle of the sternum in pulmonary tuberculosis seem to me, even if not as distinct as my reports, to be founded on the character of segmental inferiority. Only in these cases a segment, not yet diseased, may declare its inferiority, whereas the disease is localized in an adjoining, or nearby segment. I myself have seen one-sided or two-sided diminution of the areola, but also have seen retraction of the mamillæ in women who have had to stop nursing because of lack of milk. I have also seen lack of milk when the areola was hairy (in the case of Mrs. 'Lina T., whose mother died of carcinoma of the nipple).

CHAPTER V

Reflex Anomalies as Indications of Inferiority

We have already often emphasized the fact that inferiority does not make itself felt under all conditions. I should like to add besides that the determination of a deficiency becomes possible, and attracts our attention, only when the inferiority comes into prominence in some shortcoming of a function, in a failure in execution. For it is at this point first, whether during good health or in the course of disease, that it becomes perceptible and forces us to a consideration of the circumstances. Whatever we can expect from the nature of the matter, from defect phenomena, will appear as motor insufficiency, as deficient production of related glandular secretions and above all, as more inadequate development or lack of reflex actions of all sorts, but also as the opposite of this, such things as motor over-activity, as hypersecretion and as increase in the reflexes.

Virchow's hypoplasia of the vascular system might be considered as a prize case of motor weakness. We meet with deficient production, for example, in cretain diseases of the thyroid gland or in chlorosis (Kahane). We wish to direct our attention at this point particularly to the deficiency and the exaggeration of reflexes, particularly the reflexes of the mucous membranes, because there is a certain amount of material available for this, and its coincidence with other tokens of inferiority seems warranted to me. Thus it happens that the state of these anomalies of reflexes is wonderfully fitted to disclose an organ inferiority.

The following investigation by no means extends to the great number of well-known skin and mucous membrane reflexes. I had to be satisfied with putting only a minority through a systematic examination, and of these shall emphasize only the palatal and conjunctival reflexes. First however we must touch upon a class of reflexes whose presence escapes immediate recognition but can scarcely be denied. There is no doubt, that in the inner part of the organs, particularly from the tubular formation of the mocous membrane out, reflex actions might perhaps be incited at every point, and by all sorts of stimulation, reflex actions which are of the utmost importance for the continuation of secretion and excre-

tion. *If I may draw conclusions from the analogy with the phenomena to be mentioned later, it seems certain to me that certain diseases, such as, for example, cholelithiasis, nephrolithiasis, cylindruria, Curschmann's spirals, are connected with a decreased reflex capacity in the related part of the organ, without perhaps being exclusively determined by it.*

The lack of palatal and conjunctival reflexes is an occurrance well-known to all but which has hitherto played a small rôle in medicine. Still less frequently osbervation found increase in these reflexes. The universally conventional view, which is connected with such cases particularly with weakening, consists mostly in the reference to its relation to hysteria, which is in turn questioned on other sides. If, for simplicity's sake, we waive organic nerve affections, *I must make the declaration that the lack as well as the striking strengthening of these reflexes should be considered as attributes of organ inferiority.*

I offer the following as proof: (1) These reflex anomalies are found very frequently in heredity, or else occur where diseases of the related organ can be proved in the heredity; (2) they stand in the same relation to childish defects as stigmata; (3) they are found in connection with stigmata of the oral region or when such stigmata occur in the heredity; (4) they are found in connection with diseases of the related organs or when such diseases exist in the family.

Before we take into consideration the proofs and references from the list of illustrative cases, we must bring in a few details which deserve attention in later examinations. Thus with regard to the testing of the reflexes. Authors leave no doubt as to the connection between reflex activity and the psyche. A few things should be added here. If, for example, one makes a test of the palatal reflexes one can easily find that the results vary according as the patient is influenced by the test. Thus it can happen that a second examination by means of touching the palate at the height of the insertion of the uvula results in a greater reaction—the sense of a choking reflex—or a smaller one. In the first case we must suppose that through the initial unsuspected tests which were made a feeling of nausea arose in the patient which on second touching was ready to manifest itself. It is clear that in this case we no longer have to do with the normally present reflex activity in the soft palate, but with a psychically established and depened radiation, which at times is capable of heightening and is

related to an affect phenomenon. In this conclusion I am supported by the following results: the test for vomiting reflex by touching the pharynx, or the back pharyngeal wall, is often positive, whereas touching the soft palate gives no result; in these cases the soft palate seems to be outside the reflex zone. This condition is found quite often in children up to their second or third year. In addition to that, it struck me, that in little children by touching the back pharyngeal wall no vomiting reflex, but frequently coughing results, a fact which strengthens my conception that reflex anomalies of the palate and pharynx, as well as stigmata in these parts discussed before may also originate from an inferiority of the respiratory apparatus. The spreading of the vomiting reflex zone to the soft palate may be brought about by repeated tests or sudden contacts expected beforehand by the patient, and the result is then no longer free from objections. My conception derives further proof from the fairly frequent cases which show the vomiting reflex even before touching the soft palate. Thus I could call forth an increased vomiting reflex in a four-year-old girl when I put a thin little rod back of the teeth, without touching the palate or the tongue, which was all the more striking, as the child in consequence of a cleft of the hard palate showed a defect of the central back portion of the soft palate. In three cases it was impossible for me even to succeed in opening the mouth. The inspection was always denied with laughing, anxiety and indications of choking movements. Two of the cases had to do with cooks who had been in service in Vienna for some time and who were not at all unintelligent. Injuries of the mouth, of which they might have been somewhat ashamed, were not present. The third case was that of a cultured woman who had been suffering from recurring abscesses of the tonsils for many years. The incision had to be given up each time on account of the impossibility of getting a probe or a knife into the patient's mouth. I found the same state of affairs at times when no abscesses had formed. Two of the patient's sons acted similarly which gave one the impression that the vomiting reflex zone had extended to the eyes and was irritated by the very expectation of touching the pharynx. The touching of the palate may occur once and without having the person examined expect it, but in contrast to touching the back pharyngeal wall it exhibits the more delicate reagent to the reflex activity of the pharynx.

Still easier to comprehend is the control of this reflex activity by the will. And yet I think that a certain degree of heightened choking reflex can not be completely checked by the will.

These reflections and the impression which I obtained from a great number of nursing infants and little children,[2] that the pharyngeal reflex is a product of the psychomotor sphere in the post-embryonic period, permit me to classify all anomalies of all reflexes of the mucous membranes as defective functioning of an inferior organ. The pure type of this deficient performance which shows a strong relationship to the infantile anomalies, spoken of earlier, is the lack of the reflex, while the increase is to be considered in the light of over-compensation. The occurrences which lead to the heightening of the reflex are openly related to inferior, but functionally capable nerve material, increase their energy and influence over the reflex zones and thus attain the higher reflex technic. As we shall show later, the inferior organ with its psychical superstructure almost always is in the focus of its bearer's interest. It is the unsuccessful but indulged organ which keeps the psyche in a state of continual irritation on account of conscious or unconscious attention. Newly arriving stimuli—for the way to the brain is usually undisturbed in spite of deficient reflex—little by little come into a realm of higher psychical tension, which grows greater the less motor reflexes lead from it. This condition may last through the whole lifetime. Very frequently however and evidently as a sort of compensation a heightening of reflex capacity appears to take place in childhood, which bears witness in the same manner to the fundamental inferiority of the related organ, and at times of the segment also.

As to results of my investigations in regard to the palatal reflex, they fit in very well with my former representations just as did the experiments with the conjunctival reflex. We find a lack or a heightening of the palatal reflex in the most varied diseases of the nutritive and respiratory tracts, above all in angina, pulmonary tuberculosis, diseases of the nose and larynx and in certain professions, in following which the compliance of an inferior or over-compensated organ is necessary, as in singers, speakers and players of wind instruments. In all these cases, I could be sure of a predominance of reflex deficiency. The objection that there exists no coördination here, but an anomaly conditioned by the disease, or the profession, I can set aside merely with reference to the heredity of the reflex anomaly; the extraordinary or deficient palatal reflex is almost always met with again in closely related members of the family, and without having any connection between the anomaly and disease or profession. But on the other hand my concep-

[2] I am indebted to the kindness of Dr. Rie for a portion of this material.

tion gives an explanation of the fact, that so frequently members of the same family have the same disease or repeatedly follow the same, usually artistic, profession. A third fact can not be overlooked, namely, that the anomaly may be present, without being connected with the disease or profession, and reflex capacity may appear normal in spite of disease or profession, for reasons, which we have already introduced several times, particularly that the inferiority of the organ may manifest itself in other ways or at another point. Perhaps still more often is the connection between palatal reflex anomalies and gastro-intestinal diseases established. Above all it seems to me that the lack of the palatal reflex, the rarely important heightening, up to the disappearance of the uvula, is almost regularly connected with hysterical manifestations of the gastro-intestinal apparatus, and at times of the respiratory tract. Hysterical eructation, vomiting, singultus, crying fits, aphonia, the many-sided picture of intestinal and gastric neuroses almost always show palatal reflex anomalies. If the ruling conception regards the lack of palatal reflex as a ground for suspicions of hysteria, those who follow this concept are right to a certain degree, but their opponents are just as much in the right because, as we shall see later, the hysterical manifestations may take their starting point from other inferior organs so that the oral zone then appears as normal. As regards organic diseases, I could be sure that between appendicitis, pseudo-appendicitis, ulcus rotundum, all-stone diseases, diabetes, carcinoma of the gall-bladder, chronic constipation, obesity, perhaps even chronic alcoholism, and our reflex anomalies, the same connections had weight, as could be proved between disease and childish defects, or between disease and stigma.

I can not forbear to show at this point how great is the relationship between reflex anomalies and childish defects. Both are functional anomalies of the inferior organ which may last until an end is made by the compensatory intervention of the central nervous system, the psyche. Furthermore the manner of manifestation of many children's defects is nothing else than an unusually continuing heightened reflex. This is the case in blepharospasm, more rarely nystagmus, thumb sucking and lip sucking (see the sucking reflex), stuttering, vomiting, enuresis, incontinentia alvi. All these are aroused, not from the outside, but from within and are under the impulse of the central nervous system. *They are transformed methods of function of the inferior organ, which come to light in infantile errors as well as in the reflex anomalies and these obey the compensating and over-compensating power of the portion of the psychomotor sphere which has now attained super-value.*

In the following I will trace the relationship of childish defects and reflex anomalies to enuresis still further. I can scarcely expect a serious objection if I place this affection among the number of functional inferiorities. The opinions of individual authors who think that organic hypoplasias may be found in the bladder or in the central nervous system, can change nothing in this conception, and moreover, are in harmony with my ideas concerning eternal and internal stigmata. Now in the symptomatology of enuresis there is a characterizing sign, according to which a direct division into two forms was attempted: namely the behavior of the sphincter in catheterization, which appears now as atony (lack of reflex), again as sterengthened tonicity, as a spasm (heightened reflex). In this opposed behavior we can recognize the already familiar reflex anomalies of the inferior organ and we would be in a position from this reflex anomaly alone—enuresis, this childish defect, need not always appear in spite of inferiority of the urinary apparatus—to infer the state of things, namely to surmise the inferiority of the urinary apparatus or the sexual apparatus in the family.

If we have to do with reflex paralyses following upon organic nervous diseases, we must not forget at the same time that according to the established principles the organic disease is localized in the inferior channels. We must think particularly of the phenomena of segmental inferiority, which surely plays a part in tables, in occupation diseases, writer's cramp, etc., in pseudohypertrophy and Erb's disease.

The brother of a physician fell ill of tabes dorsalis, which for some time manifested itself as atrophy of the optic nerve. The doctor himself and several of his brothers and sisters had in their childhood suffered from blepharospasm. The conditions might be similar in tabetic bladder and rectal disturbances, in ataxia, girdle sensation, larynx and gastric crises, whereas in paresis a fundamentally inferior brain may be surmised.

I should like to introduce the following case in regard to the significance of the palatal reflex anomalies in connection with diseases of the air passages and the nutritive tract.

Heinrich R., merchant, 52 years old (already mentioned), has for many years suffered from frequent tenesmus with diarrheal evacuation. Ten years previously he had a violent attack of gallstones which was completely cured at Karlsbad. One of the patient's brothers, a doctor, was operated on by Kehr for the same affection. The mother suffered from enlargement of the liver. Palatal reflex in the patient negative. His son, Herbert, sixteen

years old had appendicitis four years ago, which was completely cured after internal treatment. At that time there was obstinate constipation. No palatal reflex, slight defect of speech, slight degree of epignathia. One of the patient's daughters has very stubborn constipation. No palatal reflex. The youngest son, 11 years old, shows epignathia to a slight degree, has a defect in speech like his brother, no palatal reflex. In this case I wish to emphasize the inheriting of the lack of palatal reflex and the fairly radical intestinal inferiority in the family which reveals itself in different diseases, as well as in a decided tendency towards obesity.

Mrs. Amalie B., 61 years old was, as a child, very weak and thin and is supposed at times to have suffered from hemoptysis. Since her twentieth year she has gained a great deal of weight in spite of continually practiced self-denial in diet. No palatal reflex. Of her five sons, in three I could find the same lack of palatal reflex, the fourth had died in diabetic coma. I never examined this one or the fifth son. Nevertheless I point to my cases of diabetes in which also the palatal reflex was wanting. The oldest son is apparently healthy, the second of the three whom I examined is obese, inclines to constipation and is troubled by recurring anal fissures and by anal eczema. The third was operated on a year ago for appendicitis, after numerous feverish attacks in the region of the cecum had been occurring for four years. With the operation came exudative pleuritis on the right side and double infiltration into the apex of the lung, which turned out favorably. Heredity of reflex anomalies such as in the first case, demonstrable hereditary inferiorities of the nutritive and respiratory tract, and at the same time variations in the diseases of the nutritive tract (appendicitis, diabetes, anal fissures), and at times only adiposity are found in reviewing the family. In addition to this we find at the same time inferiority of the respiratory tract, which reveals itself in disease in the mother and one of the sons. Further on there will be some facts in regard to the connection between palatal reflex anomalies and pulmonary tuberculosis.

Käthe H. (see III), governess, 24 years old, was operated on 6 months ago for appendicitis. Four years ago there was hematemesis. Teeth lacking in the upper jaw, palatal reflex heightened.

In *Friederike U.* (see III) and both her sisters we also find heightening of the palatal reflex up to the point of disappearance of the uvula, while in Friederike there was appendicitis, prognathia, adenoid growth, defects of speech, and in her oldest sister, prognathia, gastric neuroses and anal fissures.

Hugo R., writer, 34 years old, was stricken at the beginning of his twentieth year, with pulmonary tuberculosis which appeared rather serious and was accompanied by frequent hemoptysis. After spending about two years at the sanatorium at Alland, he took up his profession again three years ago much improved and since then has been uninterruptedly active. He shows complete lack of the palatal reflex. The patient comes from a family which has given us several prominent actors (oral inferiority). His sister also, who died of pulmonary tuberculosis, was active for a time as an actress.

Maria A., 24 years old, a governess, is being treated for hemoptysis. Left-sided infiltration into the apex. A sister also has for some time had pulmonary tuberculosis which apparently ran a light course. In both of them conjunctival and palatal reflexes are lacking. The patient suffered for some time from frequent loud eructations and singultus and as a child vomited easily and very often. Even at the present time she feels a provocation to vomit when she is brushing her teeth. In spite of deficient palatal reflex sensation of a globus often occurs as well as headaches. Individual members of the family, particularly the father (civil engineer), show ability to draw (lack of conjunctival reflex, inferiority of the organs of vision, psychical over-compensation). The lack of the palatal reflex here is related not only to an inferiority of the respiratory apparatus, the missing pharyngeal reflex is evidently connected with the hysterical manifestations of the nutritive apparatus. I often find nausea as an effect and inclination to vomit in children and older people connected with deficient palatal reflex.

In order not to weary with enumerations and descriptions, I will only present briefly a few more cases and will emphasize their characteristic features. The analysis of each case is easy to make after what has gone before.

Therese M., 27 years old, chambermaid, apex infiltration on the left side, coughs a great deal, and has in the last 3 months become greatly emaciated and suffers from night-sweats. Palatal reflex greatly heightened.

In this group belong the cases already mentioned in other connections:

Johann K., 25 years old, a student, tuberculosis of the left superior lobe, dry pleurisy on the left side, and hemoptysis 6 years ago, nevi pigmentosi on the thorax. No palatal reflex.

Fanny H., a teacher, 23 years old, began spitting of blood; apex infiltration on the left side, constipation of long standing.

The mother died of consumption, the sister has a lung disease. The right half of the thorax is better developed than the left. No palatal reflex, no pharyngeal reflex. The lack of the latter evidently has to do with the constipation.

Wladimir T., 23 years old, a student, has been coughing for two months; resonance RHO contracted, and gentle rattling in inspiration which only disappears at the spina scapulæ. Nevus pigmentosus over the middle of the right shoulder blade. In her youth, the mother had suffered from catarrh of the apex of the lung, and a brother is being treated at Davos for infiltration into the apex of the right lung. Heightened palatal reflex, and on touching the soft palate the uvula disappears almost entirely.

Further cases are the following:

Berta Sp., 23 years old, a cook. Hemoptysis for the last two months; the patient continued with her work. Infiltration of the left upper lobe of the lung. There is a nevus pigmentosus in the region of the spinous process of the seventh cervical vertebra. The teeth of the upper jaw have fallen out, while the lower incisor teeth are horizontally notched. Chronic constipation. The father died young of pulmonary phthisis. No palatal reflex. No pharyngeal reflex.

Josefine Sch., 21 years old, is suffering from loss of appetite and frequent vomiting. As a child she was chronically constipated and often vomited, particularly when angry. Since puberty vomiting occurs regularly during her period. In the last three years she has had, somewhat periodically, violent pains, colic, in the ileocecal region. There is also great sensibility to pressure. The appendix may be felt as a thickened cord. Diarrhea as reported rare, vomiting latterly more frequent. Râles in the upper right superior lobe, night-sweats, no palatal reflex, no pharyngeal reflex.

Siegfried M., 33 years old, a merchant; apex infiltration on both sides, great emaciation. No palatal reflex.

Anna R., 28 years old, landlady, every year has several attacks of angina tonsillaris. A brother died of tuberculosis, the father has emphysema. The patient has sound lungs. There is a nevus pigmentosus over the left clavicle. One of the patient's uncles on her father's side is a formidable orator, an obstructionist speaker, who speaks very often in assemblies. The patient shows lack of palatal reflex. Pharyngeal reflex normal.

I have repeatedly referred to the fact that I have been obliged to consider diabetes mellitus as well as most of the glycosurias as diseases of an inferior nutritive apparatus, particularly of an in-

ferior pancreas and liver. I once more call attention to heredity in these affections, to the connection with intestinal diseases in the patient and his relatives, to the appearance of psychoses and neuroses in diabetic cases and members of their families, to external stigmata and children's anomalies in the anamnesis. I can add at this point, too, that from a small number of cases I become convinced that the reflex capacity of the palate in glycosuria and diabetes shows the same anomalies as in other diseases of the inferior gastro-intestinal tract; the palatal reflex has usually disappeared and this defect must serve as a token of organ inferiority. The deficiency of the patellar reflex in cases of diabetes has, to be sure, another significance, namely that of an indication of the segmental inferiority.

Here are the diabetic cases just as I have met with them recently:

David W., 25 years old, a student, suffered in his youth from obstinate constipation. Four years ago his diabetes was discovered, during the development of which a great deal of sugar was execreted, with periodic acetonuria and excretion of diacetic acid. Tolerance very slight. No further cases of diabetes in the family. The father suffered from attacks which lasted for months when he could not walk nor speak. One sister suffered from a temporary psychosis. The patient lisps very noticeably still. The patellar reflexes are greatly diminished on both sides, and palatal and pharyngeal reflexes are lacking.

Margit B., mentioned in II; constipation extending to her earliest childhood, defects of speech, attacks of singultus in puberty, hysterical anxiety. No palatal reflex and a very weak pharyngeal reflex. The father died of diabetes. A brother suffered up to his twelfth year from incontinentia alvi, a sister had hysterical attacks of unconsciousness. Here also we find the connection between reflex anomalies and diabetes, neurosis and infantile defects, distributed at any rate among the individual members of the family.

Otto C., already mentioned. Died in diabetic coma. As a child had suffered greatly from incontinentia alvi. His father has been constipated all his life. His sister also suffered for a long time from constipation and fell ill very early with violent hysteria. Both father and sister show lack of palatal reflex.

Josef A., 37 years old, a furrier, complains of impotence and ejaculatio precox. Examination shows a great deal of sugar in the urine. No palatal reflex. No patellar reflex.

Regina D., 38 years old, the wife of a lawyer, complains of

pruritus vulvæ and many nervous troubles. A great deal of sugar and acetone in the urine. Patient's father died in diabetic coma. Two sisters have hysterical affections. In all three sisters there is a lack of palatal and pharyngeal reflexes. Patellar reflex normal. One sister sucked her thumb for a long time.

Anton M., 40 years old, a caterer, shows a slight defect in speech and lacks palatal reflex. Pharyngeal reflex present. Patient's mother has diabetes.

David K., whom I mentioned earlier, belongs in this group. Cracinoma of the gall-bladder, glycosuria. His difficulties began with loss of appetite and emaciation two years before his death. No palatal and no pharyngeal reflex. Patellar reflex not tried. Two daughters show epignathia; one of them suffers from hysterical coughing and loss of appetite.

As I have already stated, we almost always find lack of palatal reflex in people who frequently have sore throats. I also found the same condition in a case of herpes pharyngis in a man who had suffered for some time from flatulence and from an umbilical hernia.

The case of a hysterical patient, Dr. Heinrich O., in whom there were indications of spina bifida sacralis and adenoid growths, seems worthy of mention. The patient very often made a grunting noise and one day presented himself with aphthæ of the palate and pharynx. I also saw reflex anomalies in several cases of ulcus rotundum and in relatives of these patients. In chronic alcoholics one usually finds heightening, but also lack of the palatal reflex. These anomalies are surely not to be considered as conditions resulting from alcoholism. They show rather that chronic alcoholism is dependent upon an organic coöperation as a foundation of an inferior gastro-intestinal tract. I also saw a case of diabetes insipidus with palatal and pharyngeal reflexes lacking. I have already emphasized the relation of obesity to the inferiority of the nutritive tract. The reflex anomalies which have been discussed are often met with under this condition.

I introduced a case in regard to lack of conjunctival reflex as evidence of inferiority of the eye in Chapter I. At this point I have a second to offer.

Elsa R., 22 years old, was treated for a foreign body in the right eye. The blue colored iris of the right eye is colored brownish at a point in the upper outer quadrant. Normal sharpness of vision. No conjunctival reflex. The concidence of stigmas, reflex anomalies and foreign bodies here also raises a suspicion of inferiority.

I have already mentioned the painter Karl v. R.—photophobia, conjunctivitis lymphatica in youth, thin eyelashes, blinking in the brother. I must add that in this case also the conjunctival reflex is wanting.

In a similar manner reflex anomalies are found, usually lack of palatal reflex, in people who have attained to higher sorts of work by conquering the fundamental inferiority to their respiratory tract or nutritive apparatus. I have already emphasized three categories of these several times in other connections, singers, speakers, and cooks; I must still mention gourmands in whom I have almost always found the palatal reflex has become extinct, and in fact in a larger number of cases. To these categories I can still add: an oboe player, a trumpeter and a heavy smoker.

CHAPTER VI

Manifold Organ Inferiorities

Even though the fundamental principles of a theory of inferiority, which I have just laid down, are confirmed (of which I have no doubt), nevertheless it is rather striking that their relation to pathology has not hitherto been clearly recognized. The final reason for this seems to me to lie in the fact that the picture of organ inferiority has been only too often obscured by the intrusion of further organ inferiorities and has been made unrecognizable. Discernment is still more difficult in this connection, when one is forced to determine the inferiority in the family from the statements of one patient alone. Usually available reports are of diseases in members of the family, obtained during their lives or about affections which led to their deaths. A test for other organ inferiorities which may have been unnoticed, but which are particularly noticeable in the patient examined, often can not be carried out. On the other hand there is fortunately such a lot of explicable material, particularly in the family physician's practice, that in spite of individual gaps, owing to the difficulty of producing the material, the foundation of a theory of organ inferiority may be considered as fully established.

A second phenomenon, which is closely connected with this, is still more highly adapted to conceal the existing circumstances. For very often organic diseases can be found in almost every individual member of a family, but they concern entirely different organs, and, accordingly, seem to gainsay the claims based on the inheritance of organ inferiority. But in such cases also the connection may often be discovered and the proof of multiple organ inferiority may be secured by information concerning childish defects or reflex anomalies. The following is such a case, one which I have already used in the carcinoma theory and which I discuss more at length here:

Therese S. died at 46 years of age after an operation for carcinoma of the uterus. Her husband, Samuel S., at that time 51 years old, has suffered since his 40th year from rare attacks which are accompanied by sudden collapse and a short period of unconsciousness. Injuries frequently occur in this way. Difficulties in recollecting after the attack, amnesia and stammering afterward,

speak for the epileptic nature of the affection. It is impossible to make a psychical analysis of these attacks which occur about twice a year. The patient has chronic constipation. A son, Alexander S., 23 years old, suffered until his sixth year from involuntary micturition and defecation, had scarlet fever in his twenty-first year, which was followed by nephritis. Occasionally, a year later, there are still traces of albumin, and quite often excess of phosphates too. Sexual abstinence, even for a short time, calls forth the most violent conditions of excitement, fear of beginning insanity and violent and lasting palpitation of the heart. Ejaculatio precox. The daughter suffers from vomiting on the slightest provocation, abdominal colic and diarrheal evacuation. From time to time anal fissures appear. Painful menses, protracted labor. Her six year old son is an enuretic. All four survivors show lack of palatal reflex. The inferiority of the intestinal tract and of the central nervous system inherited from the father reveals itself characteristically in the daughter in the same manner: psychical insufficiency toward external impressions and motor defect in the inferior gastro-intestinal tract, which is stigmatized, besides, by the lack of palatal reflex and by the anal fissures. The mother's inheritance, inferiority of the sexual apparatus, reappears in dysmenorrhea and the protracted labor. Even the son shows in the accompanying psychical phenomena of his sexual abstinence and in his involuntary defecation the inferiority of the same organs that we have noticed in his father. Enuresis and the same trouble in his nephew, points, however, just as did the nephritis, to an inferiority of the urinary apparatus, which, as we shall show later, is, perhaps, regularly connected with the inferiority of the sexual apparatus (ejaculatio precox in the son, carcinoma of the uterus in the mother). That frequently, adjoining organs, and also those at a greater distance, take part more or less in the inferiority, gives us evidence in the first place, of reciprocal embryonic influence, and also arises from the embryonic connection of many an organ, while more distant organs may be influenced by hereditary conditioned degeneration of the germ-plasma in numerous places, by early correlation of certain organs, but also by a superimposed inferiority of the circulatory or of the central nervous system. In the last case, particularly, it would not surprise us to see aggregated organ inferiority appear, in case the vital capacity of the embryo seems assured.

Our assertions have been mightily supported hitherto by the conceptions and reports of clinical medicine which has long been familiar with the connection of many organic diseases. If we com-

pare our results in regard to manifold inferiority, and if we consider them in those cases in which the diseases reveal them most clearly, it becomes evident that we can speak of simultaneous, coordinate inferiority, where the former conception had usually determined diseases as dependent upon each other. This is the case in regard to two pairs of organs, whose belonging together is also proved by the common terminal issue, in respect to the respiratory, digestive and urino-genital tracts. For each of these pairs we have already found common stigmata and reflex anomalies as indications that inferiority is present. We can draw new evidence from clinical medicine. Gastro-intestinal affections in diseases of the lungs, in emphysema and particularly in tuberculosis are sufficiently known, and yet their dependence upon a primary lung disease seems to be too strongly stressed. We find that it is oftener the case for them to be entirely lacking, or to precede the lung disease by some time, and that they even extend back to the earliest childhood. We uphold the same conception also in regard to the connection of diseases in the urinary and genital tracts. Aside from the frequency of simultaneous structural anomalies in both organs, similar reasoning respecting simultaneous inferiority is entirely in place. Frequent miscarriage in renal affections is universally considered the result of the latter. All justification is lacking for this conviction, since normal parturition occurs in renal diseases and manifold miscarriages without pathologic conditions are not at all rare. The same thing is true in pyelitis of pregnancy. Nevertheless I wish to stress emphatically, that neither a one-sided nor mutual influence is ruled out through inferior organs. But the simultaneousness of organ inferiority deserves special consideration, since through it, it would be possible to obtain greater insight into pathology. The influencing of the circulatory apparatus, particularly of the heart, in a renal disease is certainly plausible according to the material at hand. By accepting a simultaneous inferiority of the vascular system, the hypertrophic heart becomes more comprehensible in such cases, particularly with contracted kidney. To my mind, we shall have to follow the connection of nephritis with diseases of the eye in the same manner. In one of my cases, at any rate, in which the patient acquired inflammation of the choroid and retina in the course of nephritis, the simultaneous inferiority of the visual apparatus seems to be determined by congenital lamellar cataract.

In a like manner I think the acceptance of simultaneous inferiority justified, where urinary organs and digestive apparatus side by

side show themselves to be diseased. Here we could mention albuminuria in intestinal affections, nephritis in diabetes, simultaneous formation of stones in the bile duct and urinary passage, etc.

In affections accompanying pulmonary tuberculosis, phenomena of simultaneous inferiority also appear. The same is true in albuminurias, glycosurias, struman, the gastrointestinal diseases mentioned before, affections of the heart, lymphadenitis and certain skin diseases. If we accept with this, primary inferiority of the urinary and intestinal apparatus, of the skin and so forth, it becomes easily comprehensible that under certain conditions these organs also may succumb to tuberculosis, as soon as an opportunity for infection is given.

This coördination plays a large part in relation to the sexual apparatus and other organs, in which the inferiority of both is often only little apparent but is so often present that I should like to state that, *there is no organ inferiority without accompanying inferiority of the sexual apparatus.* This view is made probable from the outset, by the appearance of heredity in the study of inferiority. Since now the hereditary weakness must exist in the spermatozoa and ovule, we must understand that the place of development of both, in a wider sense the whole sexual apparatus, participates in the inferiority. This seems to me to be a fundamental law of *the theory of organ inferiority,* namely, that *every organ inferiority carries its heredity through, and makes itself felt by reason of an accompanying inferiority in the sexual apparatus.* For the present the historic origin of organ inferiority does not concern us, the hereditary significance of which could evidently first appear in connection with the sexual sphere. The acceptance of an internal secretion of the genial glands scarcely touches our argument. If there should be failure of secretion or hyperfunction, they could only act on other organs, according to the degree of inferiority of these organs, which have shown themselves as inferior. One can only get an unobscured picture of such organs working upon each other by postulating simultaneous inferiority. The investigations in this group will have an enormous field to compass. Previous researches which are not directed toward our point of view of simultaneous inferiority, exist in numbers and usually only require further interpretation in our sense. This is the case in the connection of anomalies of position, flexions, infantilism, menstruation, pregnancy, climacteric with diseases of the digestive apparatus, of the blood, the kidney, the heart and the lungs. This is also the case in the obstinate and severe course of diseases of the sexual or-

gans, particularly of gonorrhea and its complications, in connection with the inferiority, which can be demonstrated, of the sexual apparatus, but also of the urinary organ, the lung and of the blood. Our conception, which essentially declares the frequency of simultaneous inferiority of the sexual organs, is only reinforced by the frequency of stigmata and of tumor formations in the genitals. And finally the whole outcome of function and growth of the sexual organs, the late, but then too full development, the early promise of growth and function, as is found in no other organ, the colossal growth energy and power of regeneration in the descendants, gives in dazzling light the picture of the phenomena in the inferior organ, just as we have previously shown it. We can state directly that a lesser degree of inferiority adheres to the human sexual organ in all cases, but can easily take on larger dimensions. In such a case those characters also are not lacking which are found in other inferior organs, such as heredity, disease, stigma, childish defects (early masturbation) and reflex anomalies.

Further inferiorities, which are associated with sexual inferiority, have to do with the nose (Fliess), the heart, etc.

The strongest opposition which our conception can encounter seems to me to be offered by the simultaneous falling ill of two inferior organs. In order to answer this question accurately a vast amount of material and long years of activity in that experimental field which nature has formed for itself in the enormous number of inferior organs, are needed. In part of these cases, a disturbance of the inner secretion, presumably, in case of disease of the one organ and corresponding weakening and disease of the other inferior organ, can be accepted. One will quarrel just as little with the reflex influence which the disease of one inferior organ transfers to the other, particularly if one remembers that to the inferior apparatus there corresponds a fundamentally inferior portion of the central nervous system, which later becomes greatly over-compensated, and thus holds a dominating position both physically as well as psychically. However that may be, I should like to touch very forcibly upon the fact that the simultaneously inferior organs seem to be bound up together in a secret alliance.

This and that secret bond can be shown nowhere else with such ease, as where an inferiority of the related portion of the central nervous system is associated with an organ inferiority. This is the case in hypochondria, hystria, anxiety and compulsion neuroses, as we shall try to show in the next chapter. It would be more difficult to penetrate into the relation of both inferiorities

when it is a case of epilepsy of psychic disease, paranoia, dementia, mania, etc. Psychoses which begin coupled with intoxications, pyretic diseases, diabetes, nephritis, or tuberculosis, surely belong in the framework of this investigation, just as do the often emphasized relations between epilepsy on the one hand and diseases of the intestinal apparatus, circulatory or urinary organs on the other.

And finally I should like to say that the discovery of one organ inferiority, considering the frequency of numerous insufficiencies, makes it our duty to seek for further inferior organs.

CHAPTER VII

The Part Played by the Central Nervous System in the Theory of Organ Inferiority—Psychogenesis and Foundations of Neuroses and Psychoneuroses

Here I wish to add a few considerations which are almost self-evident from our studies. We shall grasp the meaning of our former conception only if we exclude neither the spinal cord nor the brain from the investigations of the inferior organ. Indeed it must be emphasized that the simultaneous, manifold, organ inferiority, already characterized, extends itself to sectors of the nerve tracts of the central nervous system, and that very often there corresponds to the value of each organ a naturally proportionate value of those nerve tracts that conduct to them their stimulation and lead from them their impulses. To be sure, one cannot expect entirely conformable behavior. The inferiority may remain for a long time at unchanged level, and may also be confined only to the organ or parts of it, or else the requirements of life, domestication, culture produce an over-compensation, which if sufficient will make its way particularly in the central nervous system. The quantitive differences which show themselves by the degree of inferiority, by the localization, by the degree of compensation, can only be perceived as qualitative when looked at from the psychologic standpoint, a fact which becomes comprehensible at once when one compares the three most important constellations from the organic and nerve inferiority field with their results: *Degeneration, neurosis, genius.* The inferior organs incapable of compensation fall victims, under the influence of the outside world, to more rapid or slower destruction. On the other hand nature forms from inferior organs, under the influence of compensation, apparatuses of more variable function and morphology, which show themselves in many cases to be quite capable functionally and even at times somewhat better adapted to external circumstances, since they have derived their increase in strength in overcoming these external obstacles and have consequently stood the test. Between these extremes there are still mixed formations and such as have not been completely compensated, whether because of lack of reserve strength or be-

cause of premature exhaustion of this strength, disturbance of compensation. Under definite conditions the cases of neuroses and psychoneuroses develop from this group. Some important facts will be touched upon in the following.

Functional and morphologic formation of the organ and its nerve tracks will make the inferior material functionally capable, as in normal development, partly as a result of stimulus, partly owing to continued effort. Ordinarily the central nervous system will play the largest part in this compensation. And not only physically, say by particular development of the nerve tracks, associative fibers, by the transformation of a hereditary lack of reflex to an increase of reflex capability, but above all in a psychical manner, for the reason that *a particular interest seeks to protect the inferior organ* and endeavors to ward off the harm by constant attention, and the psyche on a small scale, perhaps, gives the impulse to awaken the attention, to increase it and to connect it with that organ.

This psychical impulse receives further support as soon as the inferior organ no longer follows its own bent but has to bow beneath the yoke of civilization. How, in this process, organic instincts are changed, ennobled, psychically molded, and often transformed to their polar opposites—occurrences which are grouped by Freud as "organic repression"—shall still be elucidated.

Now this is undoubtedly overwork as compared with the manner of work of a normally valent organ and will clearly appear as such in childhood. We have to do in all these cases with the great number of shy, pale, timid children whose development and future can only be considered assured when they have learned to manage the inferior organ without injury, in other words when they have carried out the compensation and can function without effort. In the other case, if the performances of the organs are not brought about by a surplus from the central nervous system, but at the expense of the latter, the overwork will be lastingly felt and on suitable occasions, chance causes will produce a disturbance of compensation, which will result, according to the degree of disturbance and the psychical constellation present at the time in neurasthenia, anxiety and compulsion neuroses, and hysteria.

In the infantile anomalies, which play such a large part in our work, and in their course, inferiority and compensatory efforts must be clearly estimated. Every free activity of the infant and child is connected with pleasure, or is calculated for obtaining pleasure, as for instance, playing, jumping, running, seeing, hearing, sucking, evacuation of feces and emptying the bladder. The pleasur-

able sensations derived therefrom form properly the bond by means of which the child is connected with his surroundings, socially with the outside world. They are directly perceivable, adhere to the organic activity, and their traces are often readily discoverable in later life. The accentuation of pleasure is also often the cause of the stubbornness of children's faults, so that frequently the strengthening of the child's will, or the suggestive effect of some therapeutic treatment is sufficient to do away with the fault. In the psychoanalysis of the neuroses Freud has demonstrated this primary pleasure principle, and I, too, could always find it in my cases. This fact, moreover, seems convincing to me, namely that I found again the the dreams of healthy grown people, who in their childhood had suffered from such faults, the remembrance of such pleasurable sensations in the form of wish-fulfilment by means of a dream. This was the case in dreams of such people who had suffered from enuresis in their childhood, and now at intervals dreamed of water, of swimming or of fire.

Approximately normal organs with a corresponding central nervous system sufficiently capable of assimilation, adjust themselves without delay to the requirements of surrounding culture. No wonder, since they themselves have helped in building up and directing this civilization. On the other hand, changed and increased external requirements, disappointments, cares, traumatic influences, diseases, change of surroundings may show up an organ and at the same time its central superstructure as inferior and may disturb its compensation which is with difficulty maintained *for the inferior organs meet with difficulties and dangers everywhere, a fact which corresponds to their natural relation to their surroundings, and which shows the real basis of Darwin's theory of natural selection.* If it is to be mastered, this must be done with heightened expenditure of strength. Even the normal organ has the task of subordinating its unrestricted, pleasure-seeking disposition to the compulsion of education. The nutritive apparatus may only find satisfaction in so far as the social organization and the great aversions of civilization permit it. Thus the superior psychic realm is forced to do certain tasks, which in the beginning are not easy, but which on the average undoubtedly succeed by reason of the heightening of the functional capability. In the case of the inferiority of the organ, however, and the corresponding insufficiency of the related portions of the nervous system, the participation of the organ and its activity in the demands of culture remain behind. The function then does not follow the required specified cultural

paths but is predmoninantly engaged with seeking pleasure. We accordingly find in the development of the normal organ a certain subordination of the pleasure component to the activities called forth by the environment—let us call them the "moral" activities—the final success of which ensures the child's cultural development. The harmony of physical and psychical functional capability, a psychophysical parallelism in the true sense of the word, characterizes the development of the normal child. In the inferior organ it is different. If there is a particular retardation of the development of the organs, as well as of the related nerve tracks, all attemps at culture are unsuccessful and conditions such as idiocy and imbecility result. But in milder cases also, the inferior organ turns spontaneously to gaining its desire, averse to the psychical interference, and therefore indulges the more, the longer it has to wait for the moral redemption—Freud's repression. Since in the meantime the organ has become accustomed to the wanton activity, it will now accomplish the later repression against greater organic opposition, and introduce a lasting struggle which will be felt as a torturing compulsion. These conditions may be most clearly seen in the cultural development of emptying the bladder and evacuation of the feces. Left entirely alone these functions go on purely wantonly in the infant and are consequently connected with sensory gratifiication as befits every instinctive organic function. The influence of the surroundings is sufficient to place the function of the bladder and of the rectum on a "moral" basis in normal organs and in normal psychomotor superstructures. But the thing which I must add to these important observations of Freud's is as follows: The childish faults are only the externally perceptible phenomena arising from the disturbed psyche and mark the lack of an adequate compensation in the psychomotor superstructure of the organ. Under normal conditions this superstructure is influenced by the peripheral stimulis of the bladder, of the rectum and likewise of the eye, the ear, the skin, the nutritive and respiratory organs, and is impelled to continued organic growth, and to this there corresponds—in normally developed nerve paths—a psychic development suited to the environment. Touching the inferior organ, however, the parallelism in the psychophysical development very often gives way here to a psychophysical contrast. The psychomotor superstructure of the inferior organ carries on a continual battle against the pleasure activity and for the sake of the "moral mission" of the organ. The result depends on the capability of development of the fundamentally inferior superstructure, on the congenital growth

energy of the related cerebral cells and on the peripheral stimuli reacting on the same. If progress is to result, the fundamental inferiority of the psychomotor substance must be compensated. In another place we have pointed out that this compensation often leads to over-value of the organ, and finally conclude that this must be by means of over-valuation of the psychomotor superstructure.

The compensatory, over-valuation may be complete, and then the increased psychic and physical relations and their associations will enrich the psyche as a whole, but at the same time characterize it. From this point of view an understanding of distinguished and genius-like activities is possible, and at the same time a conception of the prerequisites which very often lay the foundation for a choice of profession or a particular hobby and peculiarity. I have already referred to the degenerative predisposition of Mozart's ears, to Beethoven's otosclerosis, to the stigmatizing of Bruckner's ear by a nevus. I have also spoken of the infantile defect in Demosthenes's development of speech. It is said of Moses, the orator and leader of the nations, that he had a "heavy tongue." The hallucinatory phenomena in Schumann's psychosis show us the increase and over-compensation in the psychic superstructure of the ear, but show us at the same time even as every hallucination does, the miscarriage of a psychic victory and of psychophysic harmony. Clara Schumann (B. Litzmann, "An Artist's Life from Diaries and Letters"), tell of her childhood; "This woman [the maid in whose care she was] simply wasn't talkative, and it was probably for that reason that I only began to say disconnected words when I was between four and five, and at that time understood just as little." And in another extract: " . . . Since I heard so little talking and showed so little interest in it myself . . . My parents often complained, particularly as I began to speak, that I did not hear well; and I did not get over this difficulty until about my eighth year, although it improved at once, the more I began to talk myself and the more I noticed what was happening around me and to me." Add to this her father's remark: "This is the opening chord of an artist's life, which in its course, by the fullness of pure melody which it bestowed is a bringer of joy of a rare sort to countless people, yes even more than this, it even was to become almost a model of complete and purified harmony of art and life. It begins with a harsh discord." One of our best-known piano virtuosos, R. B., suffered in his childhood from purulent otitis media and perforation of the ear drum in both ears.

I have already mentioned the tokens of degeneration, childish

defects, reflex anomalies, in speakers, singers, and actors. These tokens, as well as the frequent diseases of the respiratory tract of such persons or in their families, lead us to conclude definitely a fundamental inferiority of the respiratory apparatus and consecutive over-compensation in the related psychic field. The same is true of cooks and gourmands, a fact which I have emphasized in another place. I must, however, call your attention to the fact that in these people the frequent gastro-intestinal diseases as well as the poor teeth, surely do not originate from hot or biting food, but rest upon the inferiority of the nutritive organs. Thus for instance the ulcus rotundum, whose tendency to recurring and carcinomatous transformation can be first understood from this point of view. We find similar conditions in painters as in musicians. I shall not speak of individual cases, such as Lenbach and several artists whom I know. But the optical examinations recently instituted in schools of art show optical anomalies in 70 per cent. of the students.

These are the results, when considering the successful cases of over-compensation, which are evidently sufficient to explain and correct Lombroso's mistakes. But what happens when the compensation is not successful, when the psychic impulse arising from physical need—on the one hand insufficiency of the organ, on the other pressure of life and culture—meets with more unserviceable brain material, when the compensatory activities only get half way? A condition of high psychic tension must naturally arise from these psychophysical relations, which causes those persons who undergo such tension to be no longer capable of contending with any sort of heightened requirements. They suffer incontinence of urine and involuntary defecation at the slightest difficulties in human life, at tests, with fright and excitement, and return to one of those infantile anomalies which they have with difficulty conquered and which, as I have already shown, represent continuations and further developments of heightened reflex manifestations. They stammer, vomit, laugh, cry, scratch themselves, tear their hair, start, blink or have violent attacks of spasmodic sneezing upon seeing a bright light, squint when looking at anything close at hand, etc. All these phenomena are too well known individually for me to have to prove them by means of illustrative cases.

The mastering of children's defects then, and all the difficulties which arise from the inferior organ, point to compensatory activities in the superstructure and if hitherto the childish defects were external tokens or organ inferiority, it now appears that they really

represent—like Chladny's tone figures—lines of direction from the life of the psyche, and are signals which indicate the peripheral and central inferiority which has not yet been successfully overcome.

In regard to reflex anomalies in the inferior organ I can still add that the deficient reflex may get its psychic contrast by reason of the compensatory growth of the related psychomotor zone, so that if, for instance, the palatal reflex is lacking, an excitement will, however, bring retching and vomiting with it. This state of affairs is not rare; I shall cite a few cases, because it seems hitherto to have escaped the notice of neurologists.

Eugenie J., 46 years old, a teacher, unmarried, was one day addressed in cutting terms by her brother. At night she dreams that her brother is burning out her throat with a candle, awakens in terror, bathed in perspiration, feels violent pressure and burning in the pharynx, in the larynx and in her mouth. She struggles for breath, thinks she has lost her mind, and tries to determine whether gas has been escaping in the room. At the same time she vomits a greenish colored watery fluid several times. Admits that she almost always vomits when excited. The examination shows normal conditions, except for a small umbilical hernia, which has always been the cause of hypochondriacal paroxysms, and complete lack of palatal and pharyngeal reflexes. The tongue is not coated, no nausea in the morning, stomach not sensitive to pressure, appetite normal. From the early history we only find that the patient was a weakly child who did not eat well, who suffered a great deal from heartburn, singultus and vomiting during puberty. According to this material we find it to be a case of inferiority of the nutritive tract (umbilical hernia, reflex anomalies, anamnesis), which is adjusted by over-compensation in the psychomotor superstructure—vomiting only appears now upon a psychic disturbance of equilibrium. The patient has been inclined to corpulence since her twentieth year.

Julius P., a merchant, 45 years old, vomits if he sees a hair or a fly near any food, and at times even if he thinks of it; occasionally also in consequence of a vexatious occurrence. In his youth he was almost free from feelings of nausea, and would, without thinking, put the most atrocious things into his mouth. Later he became an epicure and heavy eater and transformed himself from a slender youth into a corpulent man (230 lbs.). Very characteristic is a dream which keeps recurring in the same form, in which some one keeps constantly stuffing a loathsome mass into his mouth, so that he is in danger of choking and awakens in terror. One of his sons

had enuresis and involuntary defecation until he was 15 years old. Palatal reflex lacking, pharyngeal reflex greatly diminished. Here also we find over-compensated inferiority of the nutritive tract with dimished peripheral and increased central reflex ability.

Anna W., 28 years old, married, vomits at the slightest excitement. No palatal reflex. One brother was an enuretic until his eighth year and suffered from involuntary evacuation of feces. The patient's father, 54 years old, has ostensibly, always suffered from constipation. Here also we find the inferiority of the nutritive tract stamped in a different manner upon the family, while in the patient herself there is heightened central reflex as a token of the over-compensation.

The phenomenology of the successful as well as the unsuccessful over-compensation will show the same fundamental traits, the same internal structure, even though it differs externally from that of the normal cerebral development. We can always find among the achievements of the central superstructure related to the organ the following: Attentiveness, proportionately distributed and in correspondence with the organic relation with the outer world directed upon the surroundings on the part of the normal organ, disproportionately distributed and increased according to the organic over-compensation in the inferior organ, more easily aroused, but less productive by reason of unsuccessful compensation, insufficient or else not present at all in cases of lasting central inferiority. Even in this psychical phenomenon we again find the differences which have for long been considered as determinative in judging the normal brain and the neurosis or psychoneurosis, the establishment of which, however, can only occur with the acceptance of the theory of organ inferiority. In anticipation we will emphasize at this point the fact that this work aims to refer all phenomena of neuroses and psychoneuroses back to organ inferiority, to the degree and nature of the not quite successful central compensation and to compensatory disturbances which enter into the matter.

Organic nerve diseases, however, are according to our premises only special cases in which the localized inferiority is inclined to inflammatory or degenerative transformations; the combinations of organic and functional affections, typical of many clinical pictures, appears as a necessary coördination. The influence of psychic and hypnotic therapy can accordingly be easily understood. A few further citations, relating to the difference between normal psychic development and that resting upon over-compensation, have to do with recollection and memory. One can not however at the same

time lose sight of the fact that these conceptions characterize for us the symbolic in the web of the psyche and that the occurrences at its basis have a psychic continuity and psychic connection with other occurrences, such as perception, judgment and volitional processes. But their connection is just as certain with the external perceiving and executive organs, the relation of which to the surroundings determines the manner and content of all central occurrences. Thus one can declare that every organ has a right to its recollection, its memory in the central psychomotor superstructure, as a function of this psychical field. In regard to the inferior organ, functional increases are found upon the entrance of central compensation or over-compensation, one of which may become noticeable as increased recollective ability. Among the nember of memory pictures those will predominate in strength and number which belong to the inferior organ in respect to its over-compensated psychic field.

It corresponds only to the special form of our civilization and its reflection in the human psyche, that the eye, ear and organs of speech are held to special activities and according to this acquire very special development of their psychic superstructure even in the normal. Wherever compensation or over-compensation enters, the memory activities belonging to the organic superstructure are heightened, but are also subject to all the dangers which threaten the increased growth of inferior portions of an organ, such as disturbances of compensation in the form of weakness of memory, amnesia, an increase in particularly stressed memories, associative strengthening, etc.

I can not go any further into detail at this point. A similar point of view is at the basis of the development of critical ability in the superstructure of the inferior organ, increased power of introspection, inspiration, intuition and the comprehension of the genius, the building up of hallucinatory characters in the psyche, the development of the abnormal idea on the basis of compensatory activity, which also affects the function of the will and the perception of pleasure and displeasure, etc. From the motor portion of the compensating superstructure arise all phenomena of the neuroses, which are of importance as motor discharges, such as tic, forms of paralysis and hysterical cramps and paralysis, epilepsy, etc., whose whole clinical picture owes its origin to the actual constellation in the psychomotor superstructure, and which is less connected with the compensatory advancement of the reflex mechanism. The occupation cramps, writer's cramp, etc., may be classed here as compensatory disturbances.

In the infantile anomalies to which are ascribed masturbation characteristics, sucking the thumb, sucking the lips, tickling the skin, touching the anus and actual early masturbation, we can again observe the wanton inclination aimed at the obtaining of pleasure, which is peculiar to the inferior organ, the mouth, intestine, genitals. The same thing is true of nocturnal enuresis. If we now remember that all inferior organs are perhaps regularly accompanied by inferior sexual organs, in which the inclination for pleasure is likewise present in a marked degree, if we admit that almost all the children burdened with childish defects also engage in masturbatory touching of the genitals, we must establish as a result of this consideration the fact that the possession of inferior organs can very easily lead to sexual precocity, to early masturbation.

If this distinguishing feature has appeared, there are at least two dominating cerebral portions which undergo heightened growth stimulus and heightened psychic impulsion, and one of these builds itself up over the inferior sexual apparatus. It is quite comprehensible that both the psychic fields should be associatively connected, very like the *audition colorèe* which also owes its origin to the compensatory superstructure of two inferior organs. In this manner psychic groupings arise very early, groupings which have been formed fundamentally, of two sorts of impressions: on the one hand from the world of sexual sensibility and ideas, on the other from the psychic superstructure of the eye, ear, mouth, excretory organs, skin, nose. In all these cases the fate of the psyche as a whole depends upon the complete or incomplete mastery and balancing of the two corresponding inferiorities, the central and peripheral inferiorities; the fate of the patient, then, is at the mercy of the complete or incomplete compensation, of the lasting or interrupted compensation. But the prospect becomes much more difficult as soon as the sexual components enter the question and touch upon and influence the other psychic superstructure. The compensation may then be a universal one; it may however only have developed in one or in neither of the psychomotor fields. We can not dwell here on how it affects individual cases, in the various psychoneuroses. Only, I must state that the interesting psychic phenomena of repression, substitution, conversion, which Freud demonstrated in his psychoanalyses and which I also found to be the most important constituents of the psychoneuroses, develop upon the above-described formation of the psyche in the case of inferior organs. In a like manner the usual statement of "sexual basis" of pschoneuroses is cleared up by the above. Complete

compensation such as we find in artists, geniuses, a few professional people, has a great many psychic functional characteristics in common with the psychoneuroses, and has with many, especially with hysteria, a common culmination point, the hallucinatory character of the psyche.

The following quotations from "Grimm's German Mythology" bears witness how closely our conception of the compensation and over-compensation of the inferior organ corresponds to the popular feeling:

"We find in the heroes as well as in the Gods want of limbs: Orin is one-eyed, Tyr one-handed, Loki [?=Haphæstus] lame, Hoeder blind, Vidar dumb, Hagano also one-eyed, Walkeri one-handed, Gunther and Wieland lame; and there are a goodly number of blind and dumb heroes. But it seems heroic that while a defect disfigures childhood and early youth suddenly from out such gloom appears the radiant presence as well as the power long curbed. To these belong the blind birth of the Guelph and the folk-tradition birth of the Hessian and the Suabian."

CHAPTER VIII

Biological Viewpoint in the Organ Inferiority Theory

The inferior organ gets its most distinct imprint in the phenomenon of congenital deformity. The nature of the inferiority is shown almost as clearly in the external stigmata. The connections of other tokens of inferiority with both of these have been so clearly pointed out, in this work, that the conclusion is evident: The inferiority of the organ is embryonic in origin.

The variability, the growth energy, and compensatory ability have likewise been strongly enough emphasized. These are what guarantee the possibility of an adjustment, provided that the vital capacity and duration of life do not seem to be threatened by the fundamental check in growth,—provided, furthermore, that the drawing in of reserve strength does not meet with too great a hindrance. The final result of the struggle for the existence of the organ arises from the relation between the existing, structurally capable material, and the required work. The efforts at growth which come to light in this process and the results are not to be compared with those of normal organs. They bring before our eyes, rather, a portion of that strength which expresses itself in the liveliness and variability of embryonic growth. A second assumption is justified by this: Namely, that the inferior organ bears with it in morphology and function, its embryonic characteristics.

By analogy from the causes of deformities, the following outline of the causes of organ inferiority can be drawn up:

1. Primary lack of formative material. In this we can observe particularly well the familiar appearance or can find exhausting diseases, lues, alcoholism, poisoning of the parents at the time of procreation. In the latter case, nevertheless, the selection of the organ will frequently be further determined by its own primary inferiority.

2. Inflammatory processes during the embryonic development, by which again the selection of an organ can not occur without determination.

3. Disturbing influence of a neighboring organ in the foetal period. In this case also a dispositional case must be sought for the injurious coöperation.

If we wish, from the point of view now won, to attain a uniform perspective of the inferiority of organs, we must turn our attention to the embryonic formative material and its destiny. The inferiority which we are discussing here never occurs as a result, but always as a preliminary condition, and is the one which people have usually tried to class with the confused idea of disposition. The incompleteness in this type of organs, the cessation of development which can often be found in them, the lack of development in a historic or functional direction, the functional deficiency in the postfetal stage, and on the other hand the increase in its growth tendency owing to compulsion of compensation, and possibility of compensation, the frequent success in gaining greater functional ability, force us to accept the fact that all inferior organs have a part of the fetal characteristics. With the breaking away from the maternal organism the struggle with the outer world begins for these organs and organic systems, a struggle which must of necessity be kindled, and which begins with greater violence than in a normally developed apparatus. Higher rates of disease and mortality accompany this struggle. Nevertheless the fetal character supplies at the same time the heightened possibility of compensation and over-compensation, increases the ability of adaptation to usual and unusual resistance and assures the formation of new and higher forms, of new and higher execution. One easily gets the impression that the organism has economized in the fetal development, that it arrested the embryonic maturity at a certain place, in order to give the organ a means of maintaining itself for life, a heightened formative power. And one can scarcely dispose of the conception that this new formative attempt is undertaken in those organs in which a series of ancestors, owing to external causes, to changed living conditions, have suffered injury during their lives. Thus the inferior organ presents the inexhaustible trial material, by means of the constant working over, repudiation, improvement of which, the organism seeks to come into harmony with the changed conditions of living.

The struggle with the hostile influences of life very often threaten the possessors of inferior organs with disease and death, even if they can enter the world as viable. Terrible and terrifying as as the demands of this hecatomb, it nevertheless hinders the unrestricted spread of inferior formative material of humanity, if one considers a fairly long stretch of time. If, however, on the one hand inferior organs incapable of compensation meet with more rapid or slower destruction under the pressure of the outside world,

nature, one the other hand, by the creation of a compensation, forms apparatuses of variable function and morphology, which prove themselves in many cases to be quite functionally capable and somewhat better adapted to external conditions, since they have drawn their additional strength from the overcoming of these external obstacles. The organ's abnormality is deeply rooted in the constraint of a fixed training, in the variability and greater tendency to growth which often adhere to an inferior organ, and in the development of the related nervous and psychic complexes heightened by the inner attention and concentration. *The adaptation to altered conditions of living takes place preëminently, not in a struggle for existence by the survival of the accidentally stronger, but on the basis of variability and heightened growth tendency of inferior organs.*

We have proposed heredity as one of the most important indications of inferior organs and have tried to make this relation comprehensible through the phenomenon of simultaneous inferiority of the sexual apparatus. Among the possibilities of explanation of this phenomenon, the foremost place might be given to one which reckons with the additional work to be accomplished by the inferior organ, so that a vigorous demand on the organ would correspond to a check on the embryonic equivalents in the genital glands. Besides not everything which is classed as an acquired characteristic is entirely unconnected with the inferior organ. On the contrary we can assume that the most effective changes and injuries take place in the inferior organ, the heredity of which, their embryonic plasticity and variable character, is beyond doubt.

The reference of the whole organic world follows of itself. And in this the theory of organ inferiority seems to broaden and support the theory of heredity in its most important features.

APPENDIX

The Inferiority of the Urinary Apparatus.—Fate of Enuretics and their Families

At the beginning of this work there are a few considerations concerning diseases of the urinary organs, in the pursuance and expansion of which cases, we were led to establish the organ inferiority theory as the basis of a particular conception of pathology. If at the end an attempts is to be made from the illustrative cases of a single organ, again the urinary apparatus, to make clear the value and extent of the theory of inferiority, to confirm already known connections, to uncover new ones, I believe that I can best overcome the great difficulties of such a task if I only choose cases which can be arranged according to a single, and at all events distinct, point of view, those that have one symptom of inferiority in common either themselves or in the family, the symptom of the childish defect, namely, enuresis.

A vast amount of material, but only partly valuable, may be found in the literature about enuresis, its nature and its pathogenic position. I, myself have emphasized a few of its important facts in this study.[3] At this point I must confine myself to carrying through the centering of the phenomena of inferiority of the urinary apparatus upon enuresis, and to emphasizing the simultaneous inferiority of the central nervous system and of the sexual apparatus and to llustrate this with cases. In this I shall follow the schematic outline of my study and I hope that the reader will find the general conformity to tradition which was followed there, again in this.

This will be the case in diseases of the urinary apparatus, whether it is in the enuretic himself or in his family. We may expect all the genuine diseases, in the prostate, the bladder, the ureters, the kidneys and the uretha. We will however also find localization of disease, congenital anomalies, a particular and usually difficult course of infection and functional affections. I should like to stress as particularly interesting facts in my material, carcinoma of the urinary apparatus, contracted kidney, scarlet fever nephritis and difficult course of gonorrhea in enuretics or in their families.

[3] I shall give a short exposition on these child errors in the "Illustrierten medizinischen Handlexikon" [edited by Dr. Max Kahane, Urban & Schwarzenberg, publishers, Vienna–Berlin], which is coming out shortly.

The second indication of inferiority, heredity, is already strikingly noticeable in enuresis itself. No less noticeable however in its appearance in every imaginable affection, anomalies and stigmata in any portion of the urinary apparatus, as has already been emphasized in the preceding pages.

We shall frequently meet with signs of the degenerations, also quite often falsely called the causes of enuresis, as peripheral phenomena of inferiority of the urinary apparatus. At any rate we find it in the sexual organ, which is almost always found to be included in the inferiority.

In regard to reflex anomalies we must refer to spasm of the sphincter, which one often meets with in people who have been enuretics. Almost as often do we find, on sounding the urethra, a relaxed, unreacting sphincter externus, both of which are anomalies, as we have emphasized in the discussion of the palatal reflex. Freud's symptom in many cases of enuresis, adductor cramp of the thigh on suddenly pulling the latter out, arises from the extension of the reflex zone of the sphincter and is analogous to the movement of choking in cases of increased pharyngeal reflex, which in some cases sometimes even takes place by pushing the spatula back of the teeth. Here we must mention also inability to urinate in the presence of others, shivering and rigor while urinating, functional dysuria, retention of the urine and polyuria, which one often finds in those who have been enuretics, or in their families.

I must lay very great stress on segmenal inferiority in enuretics. Not so much the skin anomalies, which are often found as nevi or neurofibromata at about the height of the kidney, in the region of the bladder or in the groin, but an inferiority which often has to do with the whole rear portion of the body and comes into consideration as primary weakness in voiding of the urine, evacuation of the bowels and emission of the semen, which can often be overcome, and even over-compensated and is evidently connected with an inferiority of the spinal cord from the lumbar vertebræ downwards. It is not a rare thing to find the lower extremities also involved in this inferiority. This relation is of importance in regard to the problem of tabes, sciatica, and incontinence of the bowels in the families of enuretics. The spinal column also takes part in it with indications of spina bifida or deformity, and the lower extremities with deformities, disproportionate legs or diseases of the joints.

As to what concerns the simultaneous inferiority of other organs, particularly of the sexual organs, the material prescribed will evidence. In the literature we find congenital displacement of the

testicles mentioned most often, which I also often found, and then perhaps, phimosis, hypospadia and adhesion of prepuce and glans penis, if one wishes to consider these as tokens of inferiority of the sexual organs. More significant for my assumptions are the cases of formation of tumors in the sexual organs, such as an enuretic family shows, and the almost invariably demonstrable anomalies in sexual intercourse, above all ejaculatio precox. Strikingly often the mothers in enuretic families die during or after a birth, and one often finds enuretics as step-children. From my material it appears that inferiority diseases of the sexual organs or of the kidneys may occasion such early death, while other such mothers, by reason of a difficult birth (pelvic anomalies, as segmental inferiority), or by reason of injuries during one of the first pregnancies guard themselves from danger to their lives in case of another pregnancy. In other cases conception does not take place or else reperated miscarriages prevent maternity. One then usually finds as a cause uterine myoma, renal disease, or infantilism of the uterus (narrowness of the orifice).

The relation of enuresis to the central nervous system and to the psyche is adhered to to a certain degree in the literature, without much weight given to the relations which have here been revealed. Freud, who has advanced the furthest, emphasized the significance of infantile enuresis in dream and neurosis. The Breslau School and many others with it consider, on the contrary, that enuresis is an hysterical symptom. Desire for urination and incontinence from excessive psychic strain, in laughing and crying (Bechterew), in fright, on seeing water and fire and other things have been observed by many authors, but without connecting them as Freud has done to conquered enuresis. H. Ellis emphasizes the fact that music may call forth a desire for urination in children and animals, which was even known to Shakespeare, for he has Shylock say: "And others, when the bagpipe sings i' the nose cannot contain their wine": In regard to our standpoint, we shall have to indicate that which has been said in the corresponding place and once more emphasize that enuresis, just like every other infantile defect, represents the functional side of organ inferiority. A fundamentally inferior psychomotor superstructure is placed over the organ which responds deficiently to its surroundings, a superstructure which, with every psychical overexertion even as in playing or learning, may fail, and which will only suffice as a cultural control of the organ for a time, if a lasting interest, an inner attention, watches over the ordinary wanton activity of the organ. Release from the

childish defect may be obtained through compensation in the related psychomotor superstructure and its channels which may lead to considerable strengthening of the psyche as a whole, but may also lead to all sorts of disturbances, which are present in the nature of the compensation. The psyche, however, always carries the traces of the enuretic constitution in itself and in cases, too, where the constitution is not revealed in childish faults, but only in the other tokens of organ inferiority. To the exaggerated increased extention of the reflex channels, the jerking of the feet, inability to urinate in the presence of others, dysuria, retention of the urine, involuntary evacuation of the bowels, in children is due, phenomena which we find again in hysteria, in so far as it owes its origin to inferiority of the urinary organs, while at times astasia and abasia in hysterical cases reveal the motor weakness of the segment, which is fundamentally connected with the function of the bladder. The enuresis of idiots shows us the entire incapability of compensation of their inferior central nervous system.

The one-sided over-compensation in the whole central reflex mechanism, which derives from the impulsion of compensation in consequence of manifold organ inferiority, may be at the bottom of the connection between enuresis and epilepsy. The great need of sleep, the particular soundness of the enuretic's sleep, only correspond to the increased consumption of psychic strength, while the normal work of school or of life may often make itself felt as overpressure. Pavor nocturnus in childhood, which very frequently occurs in enuretic constitutions, arises from the over great necessity for tenderness in such children which finds its outlet at night by sleep and in the dark by fright and screaming. The fearfulness which burdens almost every enuretic in childhood is a universal expression of his helplessness in regard to the inferior organ and often burdens even grown people. In later life, in addition to the usual characteristics, fear of water and fire, fear of the night, is frequently added. At times the neurotic is able to conquer the terror in every form and to achieve the contrast, extreme bravery and courage. Many of the things which we are here writing down in dry form, Jean Paul has interestingly revealed in "Schmelzle's Journey," the hero of which, as can readly be seen, shows a compulsion neurosis on the basis of inferiority of the urinary organs. Walking in the sleep, which like talking, involuntary micturition and evacuation of the bowels in the sleep, represents a wanton, pleasurable organic activity; we shall often find in enuretics corresponding to the frequent segmental inferiority. The dream of the enuretic, connected during

childhood with bed-wetting, very often contains the act of urination, and later, after the time of enuresis, the idea of swimming, bathing, boating, and definitely permits the diagnosis of conquered enuresis and appears particularly in childhood as primitive wish-fulfillment after unrestrained organic activity (Freud). Although some retain their fear of water all their lives, others nevertheless attain remarkable proficiency in swimming and boating sports.

It is, before all, the simultaneous inferiority of the sexual organs and the lasting interest in emptying the bladder which in addition to enuresis almost regularly permit a second childish fault to arise, namely early masturbation, auto-erotic touching of the genitals. With this, new opportunities are given for going astray in the psychical development. The early awakened auto-eroticism makes the child more unfitted for bringing up, the prevention of bad uncivilized impulses becomes difficult from the outside for the same reason, the child does not adapt itself to cultural life and becomes evil and unamenable. At the same time there arise in him further supports for his cowardice, shyness and anxiety and he seeks for comfort and protection from the understanding which he has of the sin, in "childish" superstitions and religious fantasies with unfortunate results. In the psychoanalysis of enurotic persons we find both in the ideological sexual superstructure. Physiologically viewed, it is compensation of the sexual organs in the psychomotor field, strengthening and check. How often these happenings become the foundations of psychoneuroses, as soon as compensatory interruptions and reciprocal effects of two inferior psychomotor fields occur, Freud has irrefutably shown in his psychoanalytic material. In my list of illustrative cases, also, there are a number of proofs which rest on firm ground by reason of their certain relation to organ inferiority and its consequences.

The accentuated auto-erotic trait which the enuretic shows and the heightened interest in his own sexual phenomena makes it seem comprehensible that in case there is no other adjustment, above all, the similar organ in other persons attracts him. In a few cases I could determine this connection so that homosexuality and exhibitionism as phenomena in people with inferior sexual organs, often in connection with the enuretic constitution, becomes comprehensible.

I must still emphasize in closing that the great frequency of enuresis in the juvenile and habitual criminal is not difficult to understand. Both, function of the bladder as well as impulses, are at times without compensatory limit in extended inferiority of the

central nervous system, and follow their course without any attention to cultural requirements.

The signs of more intense conscious effort which leads to the compensation of the central nervous system, we will miss completely only in idiots, and partly in juvenile delinquents. They appear in a distinct, though abnormal form in neuresthenia, hypochondria, hysteria, epilepsy, paranoia, compulsion, and anxiety neuroses. Under favorable conditions, however, they may fall to the lot of another category of people, strikingly functionally capable brains, highly gifted and genius-like natures, in the consideration of which we must recognize that the psychic activity has given occasion for restraining enuresis together with powerful training of the psychomotor sphere to psychical and spiritual superiority. Very often in not wholly successful over-compensation, we find border-line and mixed cases.

I now briefly present the material to which I owe my report on the inferiority of the urinary organs; the choice was made according to the occurrence of the childish defect, enuresis, in the family.

1. *Siegfried H.*,[4] 34 years old, a merchant, complains of temporarily occurring states of excitement, pressure in the region of the heart, feelings of anxiety and impotence. Since his childhood he has suffered from constipation and has several times had violent attacks of abdominal colic. In the course of a severe posterior urethritis there was for a few days retention of urine. Thyroid gland considerably enlarged. General condition as well as analysis of urine normal. Tendency to exhibitionism. The father died of nephritis, three sisters died in confinement. The patient says that he suffered from enuresis until his 9th year.

2. *Oskar C.*, 23 years old, a student, complains of inability to learn, pressure in the head and nervous irritability. Lately there have been spontaneously occurring pains in the right testicle. Normal condition, except for thickening of the head of the right epididymis. There are two little knot-like thickenings along the sepermatic cord, which raise a suspicion of tuberculosis. Two analogous cases, in which the thickening had gone away led us to assume coitus protractus as a cause, while one of the cases had for a time ejaculated bloody semen [rupture of the vessel?]. In the case under consideration protracted coitus was admitted. Otherwise ejaculatio precox. The patient says that he only wet the bed a few times when he was 9 years old. An older brother suffered till he

[4] The names are greatly changed and the bearers of the same are fairly unrecognizable.

was 16 from enuresis. The analysis of the urine of the father, who is suffering from a mild form of epilepsy, shows for the time being, albumin, hyaline and granular cylinders. The paternal grandfather and grandmother died of cerebral apoplexy (contracted kidney?), one of their daughters died of uremia. A second brother of the patient suffered from acute hallucinatory paranoia and showed adhesion of the prepuce to the glans.

3. *Ignaz W.,* 52 years old, an official, has been complaining for a year of vague pains in his back and in the region of the kidneys. Condition of the urine: specific gravity 1007, slight traces of albumin, permanently increased quantity, polyuria, tension of pulse raised above normal, second aortic sound accentuated. The heart was hypertrophic. Enuresis denied. One brother of the patient and one child have suffered from it. His mother died at 26 during parturition.

4. *Dolly A.,* 7 years old, a timid, delicate, pale child who has suffered from enuresis since her birth. Her mother was also an enuretic, and her maternal grandmother died of uremia.

5. *Elisabeth D.,* 3 years old, nocturnal and diurnal enuresis. A timid child who is afraid to stay alone in the room, does not go out without having some one lead her by the hand, and who shows other great needs for tenderness, and desire for support. Pavor nocturnus. She talks of "making water" almost all day long. In the father's family there is enuresis, the material grandmother is suffering from contracted kidney. When the patient and her sister fell ill of scarlet fever, the sister who was not an enuretic, showed hematuria. (Spieler has published similar cases without establishing our relation to enuresis.)

6. *Friedrich V.,* 42 years old, a merchant, was a bed-wetter, as were several of his brothers and sisters. At that time showed temporary albuminuria to a slight degree and slight cardia hypertrophy. On the occasion of syphilis, violent intolerance of iodine appears. Chronic excess of phosphates in the urine of the mother and one sister, which I have frequently found to be the case in enuretic families.

7. *Alexander S.,* 28 years old. Abulia. In response to questions he says that the libido sevualis is lacking. Erection inadequate. Ejaculatio precox. On the left side severe varicocele, on the right hydrocele. The patient was very fond of rowing and swimming Frequent swimming dreams. Only a year ago he dreamed that he was attending to the calls of nature and urinated in his bed at the same time. Enuresis up to his tenth year. His father died of a renal effection.

8. *Albert K.,* 45 years old, railroad official. Had had painful retention of the urine for twelve hours. Went through the same thing 20 years ago. Analysis negative. The catheter passed the sphincter without finding any opposition. Ejaculatio precox. Enuresis up to his seventh year. Says he has had no swimming dreams, but he was a swimming teacher in the army. Seven of his nine brothers and sisters died prematurely. He thinks that the retention may have arisen through delay in urinating. Normal behavior after the next day.

9. *Eugen M.,* 26 years old, a bookkeeper, complains of pressure in the head and weakness. Phosphaturia. Of his 23 brothers and sisters 17 died of unknown diseases, one with the symptom of dropsy. Enuresis up to his twelfth year. Eagerly carries on rowing sports.

10. *Julius S.,* 39 years old, a writer, is suffering from nervous gastric troubles. His mother died at a ripe old age showing uremic phenomena. One brother has chronic nephritis, a second neurasthenic complaints and excess of phosphates in urine. The patient himself went through a sever gonorrhea and also shows excess of phosphates in urine. Enuresis during childhood, hypospadia and para-urethral opening.

11. *Sophie B.,* (already cited), went through parturition three times. Pyelitis during the first pregnancy with fever phenomena and pain, likewise during the second and third. Normal condition of urine directly after birth. Four months after the last delivery there were pains in the region of the right kidney. Shortly after this, chill and connected with this intermittent fever, for eight days. Afterwards lytic fall to sub-normal temperature, and canvalescence. There have been no further phenomena for almost a year. The analysis of the urine showed, at the time of the fever, pus concretions, red and white blood corpuscles, hyaline and granular cylinders. We must consider the last attack as the last relapse of a pregnancy pyelitis [without pregnancy?]. At the beginning of the sickness I declared that the patient must come from an enuretic family. After denying at first the patient admitted the following: namely that she had suffered up to twelve years of age from bed-wetting, as had several of her brothers and sisters too. The father died of carcinoma of the bladder, one sister is an idiot, one died in status epilepticus. The patient herself had always been very timid Two of her children showed enuresis up to the third year, later pavor nocturnus.

12. *Fritz C.,* a merchant, 26 years old, fell ill three years ago

with pains in the hypochondrium on both sides, which radiated out toward the bladder. At the same time a moderate fever is supposed to have set in. Analysis of the urine then showed: Specific gravity 1020, acid, normal quantity, turbid. Albumin 0.08 per cent., and in the sediment there were contained and extracted red blood corpuscles, hyaline, finely and coarsely granular casts, isolated epithelial and red blood corpuscle casts, and a few white blood corpuscles. This state has continued with slight improvement up to the present. The pains also occur still, although not very often. Differential diagnosis took into consideration nephrolithiasis, tuberculosis, neoplasm and nephralgie hèmaturique, among which the latter diagnosis seems most probable. When one day the patient showed me a burn on his finger, which he had got at night when he got out of bed walking in his sleep as he had already done a number of times and lit a candle in his sleep, I advanced the suggestion that he had been an enuretic, which the patient admitted at once. On further observation the patient showed himself to be homosexual; at times he suffered from retention of the urine for long periods of time which was always connected with a fright. The catheter easily passed the sphincter. His brothers and sisters had also suffered from enuresis, and a grandmother had died of uremia. The patient at the same time since his earliest childhood had suffered from constipation, and had always been accustomed to use the syringe every day. (Second component of homo-sexuality.)

13. *Dr. L. Z.,* lawyer, 32 years old, neurasthenic. Fell ill eight years ago of inflammation of the choroid and retina on a hereditary syphilitic basis. In the right eye there is a lamellar cataract (inferiority of the eye of an openly embryonic nature). In the urine there is regularly nucleo-albumin, at times hyaline and granulated casts as well as white blood corpuscles. Complains of sexual weakness, which improved after removal of an exaggerated phimosis. Ejaculatio precox. Enuresis until his fourteenth year, early masturbation, inclination to exhibitionism. The father suffered from paresis, the mother died of nephritis in her fiftieth year. One of his brothers showed compulsive ideas after an attack of scarlet fever at the age of twenty-six. The patient is justly considered as a strikingly capable, highly gifted individual.

14. *Hugo R.,* 11 years old, a delicate pale boy, suffers, as do all his brothers, from enuresis. According to his relatives he is shy, timid, absent-minded and does not get on very well in school. His mother died in her thirty-eighth year of tabes.

15. *Fritz Sch.,* 17 years old, shopkeeper's apprentice, had two

attacks of unconsciousness in the course of a month, which are supposed to have been connected with anxiety on account of the sickness of his mother. Weakness after the attacks, stammering, amnesia, no biting of the tongue. The physician who was called came after the attack which only lasted five minutes and which was without convulsions. Physical condition normal. He is said to have always been an unmanageable child; admits early masturbation and enuresis up to his tenth year. One of his brothers also had enuresis, another a neurasthenic affection since puberty, a third suffered for a long time from gonorrheal arthritis in the knee and ankle joints and has a congenital constriction of the anterior uretha. His mother had an ovarian cyst and had to have an operation.

16. *Sophie K.*, 29 years old, accountant, has suffered since puberty from dysmenorrhea. Half a year ago violent pains in the lumbar and sacral regions began. The examination per rectum showed an intramuscular myoma as big as a fist. Enuresis up to her ninth year. Her mother died during a delivery.

17. *Rosa E.*, 32 years old, complains of pains which extended from the sacral region on both sides over the back surface of the thigh to the popliteal space. Strong sensibility to pressure of the sciatic. State of abdomen normal. She went through two uncommonly protracted births. Both times hydramnion and retarded first stage of labor. Slight rachitic constriction of pelvis. Frigidity. Strikingly short, plump legs with very slight traces of rachitis. Contrasting with this a slender upper part of the trunk. Enuresis up to 14 years. Urine and later swimming dreams. Was never timid as a child, liked to play with fire, and occasionally "accidentally" (part played by chance!) burned up household utensils. Her mother died at 27 from a hemorrhage during parturition. One sister was operated on for myoma. She had never suffered from enuresis, but was a precocious child and suffered from a washing compulsion neurosis. A younger brother suffered from mild enuresis, which was soon outgrown, from pavor nocturnus, and as a child showed a highly developed condition of anxiety. A medical examination could probably have found in the urine of the now 22-year-old man nucleo-albumin, a condition which like excess of phosphates is very frequent in families of enuretics.

18. *Hugo K.*, 30 years old, a mechant, complains of headache, conditions of excitement and sleeplessness. Querulous behavior, and on the basis of a dream accuses a woman of his acquaintance of criminal intercourse. Corrects himself very soon and sees his mistake. Earlier he had often had violent attacks of rage. Striking

antipathy for his father. Homosexual inclinations and a morbid fear of dirt. Early masturbation. Ejaculatio precox. The catheter easily passes the sphincter. Nucleo-albumin in the urine. Suffered from enuresis up to his fifteenth year. His father and grandfather had hypertrophy of prostate.

19. *Alois W.,* 31 years old, engine fitter. For two years he has had posterior urethritis. Indications of hypospadias, operation for phimosis, para-urethral meatus. His father died at 48 with dropsical phenomena. The mother has prolapse of the uterus. The older brother was an enuretic up to his sixteenth year.

20. *Artur S.,* 28 years old, a merchant. Three months after a severe attack of scarlet fever he still showed distinct traces of albumin. He has the history of a long continued gonorrhea. Since then ejaculatio precox. Intolerance of sexual abstinence, during which he is troubled by sleeplessness, violent excitement, conditions of anxiety and fear of insanity. He admits early masturbation. Enuresis and incontinence of the bowels for some time. He had been an extremely delicate child, who only began to walk at the age of three. Only slight traces of rachitis at that time. His mother died at an operation for carcinoma of the uterus. His father has suffered since his fortieth year from rarely occurring typical epileptic attacks and an equivalent in the form of aphasia.

21. *Julius M.,* a merchant, 38 years old, complains of deficient sexual power. Relaxed sphincter. Enuresis up to his twelfth year. His mother died at an early age.

22. *Georg A.,* 16 years old, commercial student, has had posterior urethritis for half a year. Enuresis up to his eighth year and admits early masturbation. His father has suffered for twenty years from temporarily occurring lancinating pains in his legs, shows lack of PSR, positive Romberg, slight ataxia and Argyll Robertson pupil. No bladder disturbance, no impotence. His mother has had recently to have an operation for myoma, and has for two years suffered from pains in the lumbar and sacral regions. (The parents both show segmental inferiority of the lumbar and sacral regions.)

23. *Dr. M. L.,* an author, 41 years old, has for years suffered from frequently recurring sever sciatica. Sexual precocity and enuresis in the family is admitted. Syphilophobia. Inability to urinate in the presence of others and dysuric difficulties without analysis.

24. *Josef S.,* merchant, 42 years old, complains of a state of anxiety, chronic constipation, depression and eructation. He says that in himself as well as in his brothers there was greatly delayed

ejaculation. Chronic posterior urethritis with complications occurring repeatedly. Relaxed sphincter. Between his eighth and ninth year he had a painless paralysis of both legs and was confined to his bed for more than half a year (hysterical astasia-abasia or else cured poliomyelitis?). His gait, reflexes, motor power and development of the legs since that time have been excellent. On the other hand, in the lumbar portion of the spine there is a lordotic deformity. The patient suffers with anxiety, hypochondria, inclined to all sorts of complaints about his heart, lungs and digestive apparatus, and has lived with a healthy wife in childless wedlock for 7 years. Examination of the semen is refused. He admits early masturbation and enuresis into the fourteenth year, and incontinence of the bowels for almost as long. (His mother died of diabetes!) Bed-wetting just a short time ago after excessive alcoholic indulgence.

25. *Johann R.*, 39 years old, an official, complains of feelings of anxiety and swelling of the knee joints occurring almost every two weeks, preceded by pollution and diarrheal evacuation of the bowels. The condition lasts twelve days and began probably in connection with self-reproaches for the death of his father. Ejaculatio precox since then. Excessive masturbation even in early childhood, later increased pollutions. Enuresis and incintinence of the bowels up to the tenth year. At present there is morbid sleepiness and unusually heavy sleep. (Inferiority of the cerebrum.) Complains of continual violent pains in the lumbar portion of the spine and in the sacrum. The lower extremities are remarkably short in comparison to the trunk. The case was under my observation for some time. It had to do with intermittent dropsy of the knee joints. The swelling appeared regularly with rare exceptions every fourteen days just above the patella, soon attacked the knee joint and led to intra-articular effusion. In four days every trace of swelling has disappeared. It was easy to invoke a suspicion of tabes. Prostate normal. The patient is a passionate tourist.

26. *Marta C.*, 17 years old, has suffered from her earliest childhood from enuresis and incontinence of the bowels which still appear quite frequently up to the present, but which can however be checked for a time by psychic influence. Has always been an unmanageable child inclined to outbursts of fury, but is unimpaired in her psychic functional capability. Often has catarrh of the bladder. Defect in speech. In her early childhood she learned to speak very slowly and with great difficulty. At that time she longed to go to the theatre. No palatal reflex. Mild rachitic scoliosis. Constipation, loss of appetite occurs frequently. Has had appendi-

citis and typhoid fever. She is a courageous girl who knows no timidity. First period at the age of 15, since then they have been regular and painless. A great deal of enuresis in the family.

27. *Wilhelm N.*, 30 years old, bookkeeper. Has had gonorrhea for eight months. Excess of phosphates in the urine. Complains of chronic constipation, which he has had since his childhood. His father died early of pulmonary tuberculosis. Patient was an enuretic up to his seventh year, his younger brother suffered for some time with enuresis and incontinence of the bowels. (A very frequent condition is to have incontinence of the bowels at first, then in later life, constipation. This often occurs in the domestication of dogs.)

28. *Fritz R.*, 27 years old, a merchant, complains of temporary impotence and regular ejaculatio precox. Adhesion of the inner preputial sac to the glans. In regard to his childhood he tells us: that he was shy, was very much afraid of being alone and in dark rooms, long persistent biting of the nails and tic of the left shoulder, clonic blepharospasm. Early masturbation. Enuresis until his seventh year. Enuresis and ejaculatio precox occur quite frequently in the father's family. In addition to these the patient also has slight struma parenchymatosa, at times cramps in his calves and cramps in the toes and fingers, no Trousseau, Chvostek's symptom positive. Varicose veins in the lower leg. Constipation and, quite frequently, headache. (Inferiority of the legs? Long lower extremities. Is very fond of touring, skating and skiing.)

29. *Dr. Robert S.*, lawyer, 32 years old, complains of psychic impotence and ejaculatio precox. Shows a morbid fear of dirt and suffers from headache and conditions of anxiety. Enuresis up to the twelfth year, a family trait. Nevus pigmentosus over the top of the bladder.

30. *Leopold M.*, 23 years old, complains of anxiety arising without any cause, inability to work and headache. Ejaculatio precox and spermatorrhea. Relaxed sphincter. No gonorrheal infection (just as little in the above cases, if it is not mentioned). Denies early masturbation and enuresis, but says that the latter is a family trait.

31. *Leo T.*, an official, 34 years old, complains of frequently occurring pains in the region of the left ankle joint (rheumatic in character), of irritability, exhaustion and violent outbreaks of perspiration. Repeated analysis of the urine shows only an excess of phosphates. The question in regard to ejaculatio precox is answered in the affirmative. Likewise the one in regard to enuresis in the past.

32. *Martin R.,* a merchant, 33 years old, complains of frequent sense of pressure in the stomach, eructation, loss of appetite and heightened irritability. The examination gives no positive results. Sexual intercourse very rarely. Ejaculatio precox at that time. Frequent masturbation (in casual relation to the neurosis of the stomach) and pollutions. Enuresis up to his eighth year. The same childish defect was present in all the brothers and in the only sister. The latter has remained childless after ten years of married life.

33. *Max S.,* 26 years old, an author, complains of severe states of anxiety and palpitation of the heart as well as of painful sensations in the genital region. Two years ago he had a severe urethritis. Objective condition negative. The patient says that he suffers from frequent pollutions and ejaculatio precox. Spasm of the sphincter when the sound is introduced. After long hesitation admits enuresis until his eighth year. His father died of cardiac paralysis, in his forty-eighth year, while in the best of health (nephritis?).

34. *Dr. Rudolf S.,* 38 years old, refers his cured ejaculatio precox back to gonorrheal infection. Enuresis admitted. Urine games in childhood, extinguishing fire, etc.

35. *Rudolf W.,* manufacturer, 26 years old, complains of exhaustion, dizziness and pressure in the head. Objective state negative. The examination brought an admission of sexual weakness, psychic impotence alternating with ejaculatio precox. Overheated sexual phantasy. Denies enuresis for himself, but admits it for his brother. In the frequent pollution dreams he dreams of urinating.

36. *Max B.,* an official, 33 years old; swelling of the lymphatic gland as big as a hen's egg, quite apart from these numerous small swellings in the left groin. Syphilis a year previously. Since then there has been no ulcer, no peripheral lesion. Abdominal organs and vertebral column intact. . Catarrh of the apex of each lung, state of urine normal. Neurofibroma in the region of the left kidney. My question about enuresis was answered affirmatively as well as the one in regard to ejaculatio precox. (Inferiority of the lower segment, localization of tubercle bacilli in the inguinal gland?) Extremely long legs, short trunk. Often dreams of fire and water.

37. *Max Sch.,* official, 38 years old, complains of conditions of fear, anxiety, palpitation of the heart, temporary attacks of unconsciousness. Frequent swimming dreams. Question in regard to enuresis is answered in the affirmative.

38. *Paula D.,* 37 years old, a merchant's wife, during an attack

of typhoid had the hallucination that the house was burning and that the children must be saved. Usually she is a courageous woman but always shows tremendous anxiety as soon as she hears the fire-alarm. Enuresis in the family.

39. *Sophie L.,* 32 years old, office holder, has suffered since her twelfth year from ideas of fear, agoraphobia, terrified screaming at night. She often dreams of fire and rain which soaks her through and through. Enuresis up to her eleventh year.

40. *Alexander H., 22* years old, has suffered since childhood from headache, weariness, dizziness, stuttering and anxiety and compulsive ideas. One of his compulsive acts often consists in lying down on the bed with dirty shoes, "in spite of the fact" that he comprehended that he would soil the clean bed upon which his mother laid much stress. This compulsive act occurred when he had conquered the enuresis (around his tenth year) and at a time when he was in strong opposition to his mother. Likes to look into the fire for hours at a time. Swimming dreams. Premature sexuality.

41. *Johanna H.,* 44 years old, climacteric difficulties. Has for some time suffered from anxiety and compulsive ideas and agoraphobia. In the course of the analysis of a compulsive act the suspicion of infantile enuresis arose, which the patient denies for herself, but admits for her brother.

42. *Dr. Max P., 27* years old, complains of anxiety and excitement which always attacks him after sexual intercourse. When he tries abstinence it drives him out of the house, through the alleys and streets, until he again flees to prostitutes (migratory neurosis?). Frequent pollutions. Ejaculatio precox. Numerous symptoms of inferiority. Enuresis up to his twelfth year. He is an uncommonly ambitious and talented person. Indications of spina bifida sacralis, nevus pigmentosus in the right groin, several hemangiomas below the region of the right kidney. Segmental inferiority. The patient tried to help his troubles by strenuous "touring." Also note above the instinctive running through the streets. The maternal line shows a number of psychoses.

43. *Alexander E.,* 33 years old, with hypochondriacal attacks since puberty, complains of suddenly arising attacks of anxiety and fear of a threatening misfortune. Forgetfulness, disinclination and an ability for work. Early masturbation which has continued until recently. Bacteriuria. Relaxed sphincter. Enuresis up to his eighth year.

44. *Julius N.,* brass-founder, 33 years old: Attacks of suicidal

ideas, ideas of injury, inability to work on account of headaches and dizziness, which set in. Sexual impotence for a year. The patient was precocious and suffered from enuresis up to his twelfth year. A strong inclination to religious ideas comes in relation to sexual motives from his childhood. Homosexual inclinations.

45. *Moritz Sch.,* 40 years old, a merchant complains of suddenly arising states of anxiety at home, in business, in busy streets. At the same time a feeling of weakness in the legs and pains in the sacral region. Is afraid of an apoplectic seizure and tabes. Admits temporary impotence. Partial adhesion of the glans with the inner preputial membrane. Enuresis up to his twelfth year. Occasional traces of albumin in the urine. His father died at 50 of cardiac paralysis. Neuroses in several of his brothers and sisters. Eagerly pursued rowing and swimming sports. His legs are too short for the tremendously developed body.

46. *Otto St.,* 13 years old, student, had numerous attacks in connection with pertussis in which he sprang about in bed, or in the room, panting, kicking about, and with his features distorted by fear, pulled himself loose if any one tried to hold him, until after about ten minutes he calmed down. His recollection of the attack was not wholly wiped out, he knew that "something had happened to him." Uusally a connection could be found between these attacks and unfulfilled wishes. He had always been a wild boy, who lived with his stepmother in a state of continual wrangling. Enuresis up to the present and at times pavor nocturnus.

47. *Lenore B.,* 20 years old, began to "kick about" at the age of 7, that is she had attacks in which she made motions of the legs such as children make when they have a full bladder. In addition to this she swung her arms and twisted her body. Finally she hurried to the toilet and locked the door. Later there were attacks of unconsciousness, of which there was apparently complete amnesia. Since these attacks also occurred in her sleep, and were at times connected with passing of the urine, and since, moreover, dilation and loss of reaction of the pupils were noticed during an attack, the patient was usually regarded as an epileptic and treated accordingly, and at all events without success, with bromides. It was only by means of psychoanalysis that the psychic conditioning of the attacks could be indicated, which showed a continuity with the occurrences of the day, and revealed particularly a tendency hostile to the mother and in the mental impressions their translation uncovered many references to the toilet. In her earliest mental development the enuresis of her brothers and sisters played a part, which she, in spite

of a like tendency—she also had suffered shipwreck sometimes—escaped through the rivalry with her brother and the iron severity of her mother, only that later by reason of the entrance of sexual precocity the fundamental inferiority might be recognized in the neurosis. The father shows inability to urinate in the presence of others and nucleo-albuminuria; the mother comes from an enuretic family. The patient has distinct homosexual inclinations and shows a slight scoliosis in the lower section of the thoracic portion of the spine.

48. *Johann E.,* 13 years old, became subject to punishment when he one night, in a somnambulistic condition, took a knife and attacked his sleeping father. Enuresis up to the present. As a child he was very timid and was afraid of being alone, and of the dark. Often cried out in his sleep, often walked in his sleep without remembering it after he woke up. Drowsiness on waking, great difficulty in arousing him. He was seduced to masturbation at the age of 6 and to coitus at the age of 10. Strongly religious temperament. Often ran away from home, was very fond of Indian stories and could not adjust himself to the coercion of school.

49. *Jakob K.,* 16 years old, an apprentice, became punishable for stealing from his master. Enuresis up to two years ago. Precocious. Already had to his account a great number of robberies as a servant, and had bolted innumerable times, to wander about the alleys without shelter.

50. *Leopold W.,* 14 years old, a musician, was accused of the theft of instruments, the money for which he used in a senseless manner. Enuresis up to the age of 10 and incontinence of the bowels for which reason he was severely beaten. In his eleventh year he was run over by a trolley-car and since then has often suffered from suddenly arising dizziness which usually attacks him in the street. Since that time also he has had occasional attacks of unconsciousness which did not show a psychic origin. No attack was observed by a physician however. During the trial, throughout which he was at liberty, he was tempted to a second theft and was condemned. After he left the prison—during his stay there he had had further attacks—he soon appropriated other's belongings again. Quite according to the whole scheme of the person—lack of sufficient compensation in the inferior brain, which can be proved by the apparently epileptic attacks, by the senseless use of the stolen instruments, by the deficient mental development and the ease with which he can be tempted to steal—it was all to easy, after the first theft, to recognize in him the future habitual thief into which he soon developed.

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